neglected in the early establishment of colonies; and although not wholly overlooked in Upper Canada, has been so loosely attended to as to produce results much less satisfactory than would be desirable. The first British settlements of the province are not referable to a period anterior to 1783; but, previous to that date, a few comparatively insignificant French colonies had been established on the banks of the Detroit, and at one or two other places on the St. Lawrence. In 1811 the population, calculated from the data given by the assessment returns made to the provincial legislature, amounted to nearly seventy-seven thousand souls; and thirteen years after, a set of district returns, deduced from more correct sources, was laid before the government, and furnished the following result:

General Return of the Population of Upper Canada as per District Returns made in 1824.

Districts.	Under 16.		Above 16.		Total.
	Males.	Females.	Males.	Females.	
Eastern	2,908	2,727	4,799	4,445	14,879
Ottawa	564	550	915	531	2,560
Johnstown	3,738	3,472	4,147	3,384	14,741
Bathurst	2,441	2,304	2,832	2,544	10,121
Midland	6,861	6,637	7,927	6,270	27,695
Newcastle	2,335	2,263	2,653	2,041	9,292
Home	3,980	4,227	4 611	3,791	16,609
Gore	3,581	3,135	3,257	3,184	13,157
Niagara	4,572	4,238	3,584	5,158	17,552
London	4,581	4,403	4,704	3,851	17,539
Western	1,785	1,650	1,964	1,553	6,952
	37,346	35,606	41,393	36,752	151,097
				Total number of Males,	78,739
				Females,	72,358
				Less Females,	6,381

By this statement we perceive an increase in thirteen years of seventy-four thousand and ninety-seven souls, making the population in 1824 nearly double that of 1811. To the great influx of emigration to the province from the United States and Great Britain is attributable this rapidity of increase, as it appears to have been during this interval that its tide was directed principally to that colony.

Statement of the Population of Upper Canada in 1826, 1827, *and* 1828, *deduced from the Returns and Census of those Years, and showing the annual Increase.*

Districts.	1826.	1827.	1828.	Increase in 1827.	Increase in 1828.		
Eastern	17,099	18,368	18,165	1,269	203 dec.		
Ottawa	3,009	3,133	3,732	124	599		
Johnstown	15,354	16,719	17,399	1,365	680		
Bathurst	11,364	12,207	14,516	843	2,309		
Midland	29,425	30,000	31,293	575	1,293	Inc.	9,670
Newcastle	12,017	12,283	13,337	266	1,054	Dec.	203
Home	19,000	21,995	22,927	2,498	1,429		
Gore	13,020	15,483	15,834	2,463	351		9,467
Niagara	19,059	19,500	20,177	441	677		
London	16,822	18,912	19,813	2,090	901		
Western	7,533	7,956	8,333	423	377		
Total,	163,702	176,059	185,526	12,357	9,467		

These returns are admitted to be, and indeed were, obviously prepared with little attention, as is manifested by the decrease stated to have taken place in the district of Niagara, in direct contradiction with the inferences to be drawn from the demand for new lands in 1827 and 1828, which produced the surveys of the townships of Walpole and Rainham. But assuming the table to be correct—and it is sufficiently so for general purposes—the population of the province appears to have increased from 1826 to 1827 in the ratio of eight per cent nearly *, and from 1827 to 1828 in the ratio of five per cent. and a fraction, giving a mean ratio of increase for two years about six and a half per cent. Increasing in the latter progression, the population would double itself in about fourteen years and a half. But it must since 1828 have advanced to even a higher ratio, from the unparalleled tide of emigration directed to the province, by the united efforts and encouragement of the government and of the Canada Company. The province now contains a population probably not far short of 215,000 souls. Of this number about 35,000 men are enrolled in the militia, which is organized into fifty-six battalions, composing the constitutional military strength of the country.

* What proportion of this large increase is natural, and what adventitious as arising from emigration, we have no satisfactory means of distinguishing here; but there is no doubt much of it is ascribable to the latter source.

If the population of Upper Canada be viewed in relation to the total superficies of the province, it will be found to bear but a slender proportion of inhabitants to each square mile; but when compared with the area of land under actual cultivation its density will become apparent. In 1828, when the whole population amounted to 185,526 inhabitants, the number of acres under agricultural improvement did not exceed in round numbers 570,000; and we have thus a proportion of three acres and about one-sixteenth for the sustenance of each individual, or—admitting the usual number of six to a family—eighteen acres and two-eighths for the support of each family.

The following table, deduced from the same district returns, will convey a more defined idea of the statistics of seven out of eleven districts:

Table of Rateable Property and Assessments for 1828 *of Seven Districts in Upper Canada.*

Description	Western	London	Gore	Home.	Newcastle	Johnstown.	Ottawa.
Acres cultivated	25,675	77,229	36,539	78,868	28,276	55,239	9698
Acres uncultivated	154,700	412,498	175,652	374,038	204,475	241,970	60,617
Amount of Rateable Property	£112,850	£272,761	£265,216	£328,387	£263,461	£217,346	
Assessment to be levied.....	£470	£1136		£1407	£924	£1311	£170
Horses	1617	2201	2626	2888	1316	2244	354
Horned Cattle.....	6640	16,756	14,387	16,282	7679	11,612	1990
Grist and Saw Mills	13	105	112	121	52	70	15
Pleasure Carriages	101	26	212	74	39	57	7

In 1824, when similar returns were made, the total valuation of assessed property in the province, on which the rate of *one penny* in the pound is collected for the public fund of the several districts, amounted to 1,969,074*l.* 13*s.* 1*d.* Halifax currency. The numerous improvements that have since then taken place must have amazingly increased that amount, from the magnitude of which a tolerably correct estimate may be formed of the intrinsic value of the colony.

In taking a general and comprehensive view of Upper Canada, and glancing retrospectively to what it was fifteen years back, the accelerated march of its prosperity and improvement is remarkably striking. Within that period, the mass of the country has been surveyed, settlements formed in almost every township, and towns and villages have sprung up with extraordinary energy, in various directions. Canals of an elegance and utility, and of dimensions* unrivalled, if equalled, on this continent, have been opened through the province. The Welland and the Rideau canals remove from the frontier, the internal communication by water, from the remotest British settlements of the St. Lawrence, to the sea. The Bulington and Desjardins canals afford important advantages to the fertile district in which they are situated.

The navigation of the lakes and rivers has undergone the greatest amelioration. Eight or ten steam-boats, some of them of great elegance, now form several complete and convenient lines of communication between the remote parts of the country. Manufactures and mechanics have also made considerable progress; coarse linens and woollen cloths are successfully manufactured for domestic use by most good farmers; and manufactories of iron are established at Marmora and Charlotteville. Saw and grist mills (there are upwards of five hundred of them), distilleries and breweries, are to be found in all the settled parts of the province. The principal towns in most districts contain proper public buildings, such as churches, court-houses, gaols, warehouses, &c.

At York, a provincial bank is established under legislative authority, with branches at Kingston and Niagara. District schools, under the general superintendence of a board, and the immediate direction of trustees, are established throughout the province; and a college, upon the principle of similar institutions in England, has been founded and recently opened in the capital of the colony. The learned professions—the members of which are in general numerous—have also their ornaments; and eight or ten presses issue weekly newspapers, for the most part very intelligently edited, and circulating widely through the pro-

* Understood as to breadth and depth. The Grand Erie canal is infinitely longer than any of these; but it is only calculated for vessels of inferior burden.

vince. Post towns are frequent, and afford conveniently the means of communication with celerity and safety.

In fact, Upper Canada is rising in a large geometrical ratio into agricultural and commercial importance; nor can we, in thus contemplating its rapid prosperity, forbear attributing it as well to the ability and efficiency that has almost invariably distinguished the administration of its government, as to the great natural energies and resources of the country.

CHAPTER V.

The Canada Company.—Act of Incorporation.—Lands of the Company.—Godrich.—Guelph.—Benefits to Upper Canada.

In the future history of the colonization of Upper Canada, the incorporation of the Canada Company will form a conspicuous epoch. The comprehensive magnitude of their judicious plans of settlement, and the promptness, intelligence, and vigour with which they were carried at once into effect, have given a prodigious impulse to the physical and moral energies of the province. Entailing enormous expenses in its consummation, the scheme of successfully throwing open a vast territory for the reception of a dense emigrating mass, could only fall within the reach of an opulent association, whose funded resources, like those of the Company, were commensurate with the broad scope of the undertaking.

On the 19th of August, 1826, the CANADA COMPANY was incorporated by royal charter, under the provisions of the 6th Geo. IV. chapter lxxv., the title of which is "*An act to enable His Majesty to grant to a Company to be incorporated by charter, to be called 'The* CANADA COMPANY,' *certain lands in the province of* UPPER CANADA; *and to invest the said Company with certain powers and privileges; and for other purposes relating thereto.*" After reciting the 31st Geo. III. chap. xxxi. by which the reservations for the crown and clergy in the Canadas are created, and stating that "divers persons had united together to establish a Company for purchasing, improving, settling, and disposing of lands in Upper Canada," and that a capital of one million sterling had been subscribed, upon which ten per cent. had been paid by the subscribers, the act authorizes His Majesty to grant a charter of incorporation, and to sell one moiety of the clergy reserves of the province to the Company, the proceeds of which sale are to represent the lands, unless His Majesty deem

fit, to reappropriate an equal quantity of land for the same purposes. The shares are then declared to be personal estate, and liable to forfeiture by the subscribers, in the event of default in the payment of *calls*, within six months after they shall have been made; the shares being further declared to be unsaleable until such calls are paid. The Company is then authorized under certain restrictions to hold lands in any part of His Majesty's dominions, and is restricted to a certain form of conveyance *. After verification at Westminster, the act is required to be registered in Upper Canada, and is declared a public act.

Under the sanction of their incorporation, the Company † entered immediately into extensive contracts with His Majesty's government for the purchase of reserves and other large tracts of crown lands in the province of Upper Canada. By these purchases the Company became possessed of upwards of two millions three hundred thousand acres, one million three hundred thousand of which, they hold in dispersed tracts of two hundred, two thousand, and ten thousand acres, and also in a few cases of blocks containing from twelve thousand to forty thousand acres. The residue, amounting to one million acres, composes one vast section of territory on the shores of Lake Huron, known by the denomination of the Huron tract, which was granted in lieu of the moiety of the clergy reserves scattered through the various townships of the province.

The consideration given to government by the Company for such

* *Form.*—"We, the Canada Company, incorporated under and by virtue of an act made and passed in the sixth year of the reign of His Majesty King George the Fourth, intituled *An act to enable His Majesty to grant to a Company, to be incorporated by charter, to be called 'The* Canada Company,' *certain lands in the province of* Upper Canada, *and to invest the said Company with certain powers and privileges, and for other purposes relating thereto,* in consideration of the sum of to us paid, do hereby grant and release to all and all our right, title, and interest to and in the same and every part thereof, to have and to hold unto the said and his heirs for ever."

† The following is a list of the Directors:—Charles Bosanquet, Esq. Governor; Edward Ellice, Esq. M. P Deputy-Governor; Robert Biddulph, Esq.; Robert Downie, Esq. M. P.; John Easthope, Esq M. P.; Charles Franks, Esq.; John Fullarton, Esq.; William T. Hibbert, Esq ; John Hullett, Esq.; Hart Logan, Esq.; James Mackillop, Esq.; Martin T. Smith, Esq.; Henry Usborne, Esq. Auditors:—Thomas S. Benson, Esq.; Thomas Poynder, jun. Esq ; Thomas Wilton, Esq ; John Woolley, Esq. Secretary:—N. S. Price, Esq. The office of the Company is kept at No. 13, St Helen's-place, Bishopsgate, London.

extensive and valuable possessions, will best appear from the following statement, laid by the Lieutenant Governor of Upper Canada before the provincial legislature.

Statement of annual payments made, and to be made to His Majesty's government by the Canada Company, under an agreement concluded on the 23rd May, 1826.

	Sterling.
In the year commencing 1st July, 1826, and ending 1st July, 1827,	£20,000
In the year ending the 1st July, 1828,	15,000
- - 1st July, 1829,	15,000
- - 1st July, 1830,	15,000
- - 1st July, 1831,	16,000
- - 1st July, 1832,	17,000
- - 1st July, 1833,	18,000
- - 1st July, 1834,	19,000
- - 1st July, 1835,	20,000

And thereafter the sum of £20,000 annually until sixteen years shall have expired from 1st July, 1826.

Thus, at the expiration of the stated period of sixteen years, the sum that shall have been received from this source, by government, for its wild lands in that colony, will be 295,000*l.* sterling.

Out of the large annual and increasing sums now paid by the Company, the expenses of the civil list of the province are in a great measure appropriated *, leaving at the same time considerable surplus sums, ap-

* Yearly payments out of Canada Company's funds:—Administration of justice.

	Sterling money.
To the Lieutenant Governor - - -	£3000
The Chief Justice - - - - -	1500
One Puisne Judge - - - - -	900
Ditto - - - - - -	900
Surveyor General - - - - -	300
Five Executive Councillors - - -	500
Clerk of the Crown and Council - - -	200
Receiver General - - - - -	300
Secretary and Registrar - - - -	300
Attorney General - - - - -	300
Soliciter General - - - - -	100

plied to purposes of local improvement. By the contract the Company is authorized to expend, under the sanction of the provincial government or of the colonial secretary of state, upwards of 45,000*l.* of the purchase-money, towards the construction of works of public utility, within the Huron tract, which, independently of the large sums applied out of the corporation's own funds, is the most satisfactory pledge of the rapidity with which its amelioration and settlements must increase, as it is well known that capital judiciously laid out, is the very hinge of successful colonization.

The Huron tract, which is the largest collective mass of territory belonging to the Company, is nearly triangular in its general outline, and extends about sixty miles along the south-eastern and eastern shores of Lake Huron. It is bounded to the southward by a tract of waste lands of the crown, and the townships of Lobo, London, Nissouri, and Zorra; and to the north-east by unsurveyed crown lands and Indian reserves. It lies between 43° 10′ and 43° 53′ of north latitude, about forty miles, at its nearest point, from the head of Lake Ontario, and not more than thirty miles from the borders of Lake Erie. The whole tract has been surveyed, and subdivided into twenty townships, viz. Colborne, Hullett, Mackillop, Logan, Ellice, Easthope North, and South, Downie, Fullarton, Tucker Smith, Biddulph, Usborne, Blanshard, Bosanquet, Williams, M'Gillivray, Stanley, and Godrich.

The general surface of this territory is remarkably level, and frequently presents rich natural meadows and excellent pastures. The soil chiefly consists of a deep, rich, black loam, with a subsoil of clay intermixed with sand, which, in point of facility of cultivation and fertility, does not probably yield to any in the province. The forests are composed of the most valuable and useful timber, and are not of that almost impenetrable thickness, that in general characterizes a Canadian wilderness, but are so disposed as to diminish considerably the labour of clearing, which is one of the preliminary operations of a new settler. The maple, beech, elm, and basswood are the predominant species of trees to be found in these forests; the perennial foliage of which, decaying during successive ages, has formed on the surface a deep vegetable mould, endued with a degree of richness, that will not require manure after years of

PLAN

of the Town of

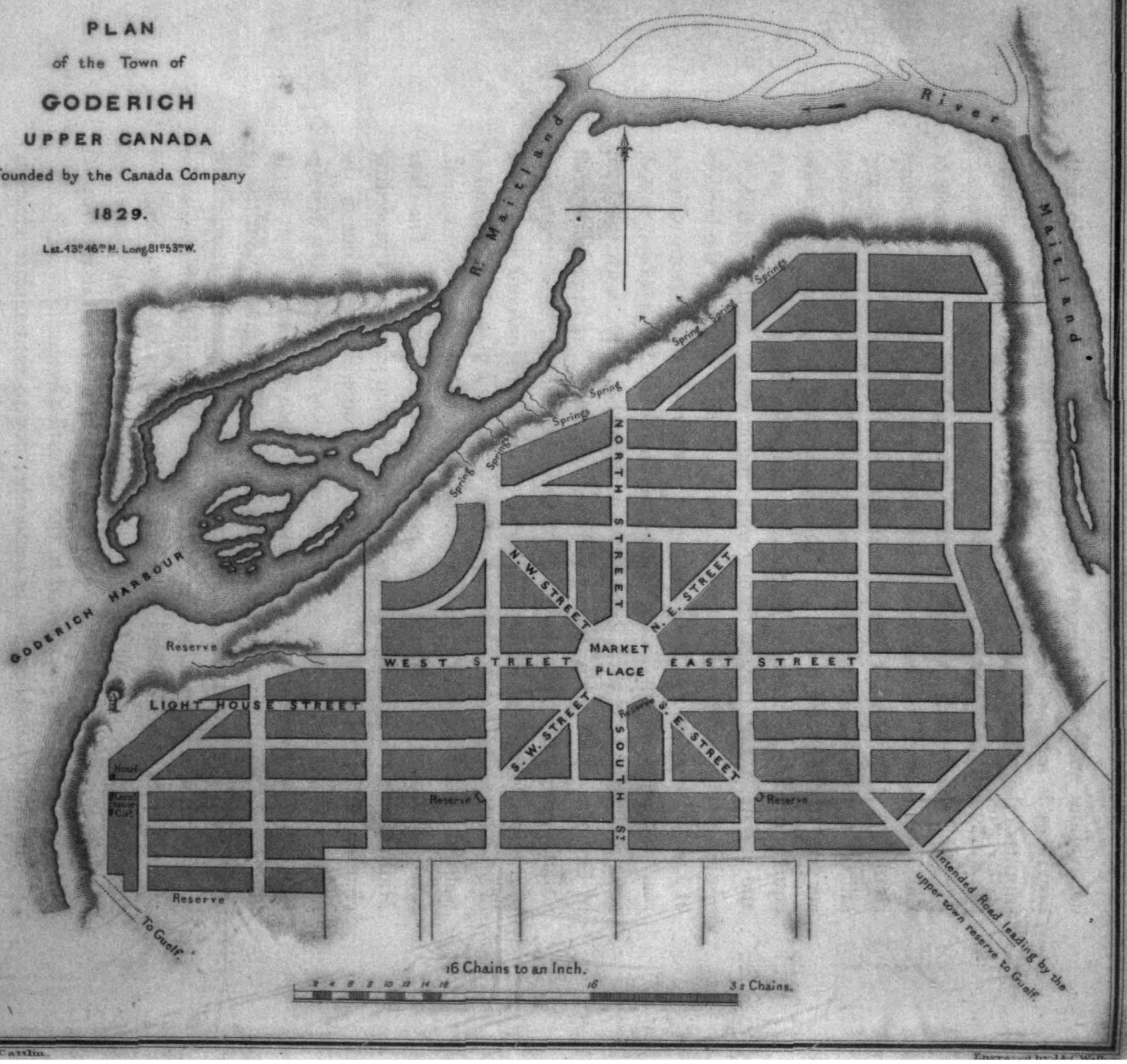
GODERICH

UPPER CANADA

Founded by the Canada Company

1829.

Lat. 43° 46m N. Long 81° 53m W.



Reduced by F. Cattlin.

Engraved by J. & C. B.

cultivation, and would almost defy exhaustion. The maple, in both provinces, is a source of essential profit to the farmer, from the copious supplies of sugar he derives from it, by the most simple process, and with the least possible labour and expense.

The soil is well watered by the river Maitland, a large branch of the Thames and its tributaries, the river Aux Sables, and numerous rivulets and brooks. Fresh springs abound throughout the tract, and salt springs are frequent. The rivers are partially navigable, and are well adapted to the erection of mills; indeed many of the minor streams are equally capable of working machinery, and offer many sites where grist and saw mills, carding and fulling mills, might conveniently be built.

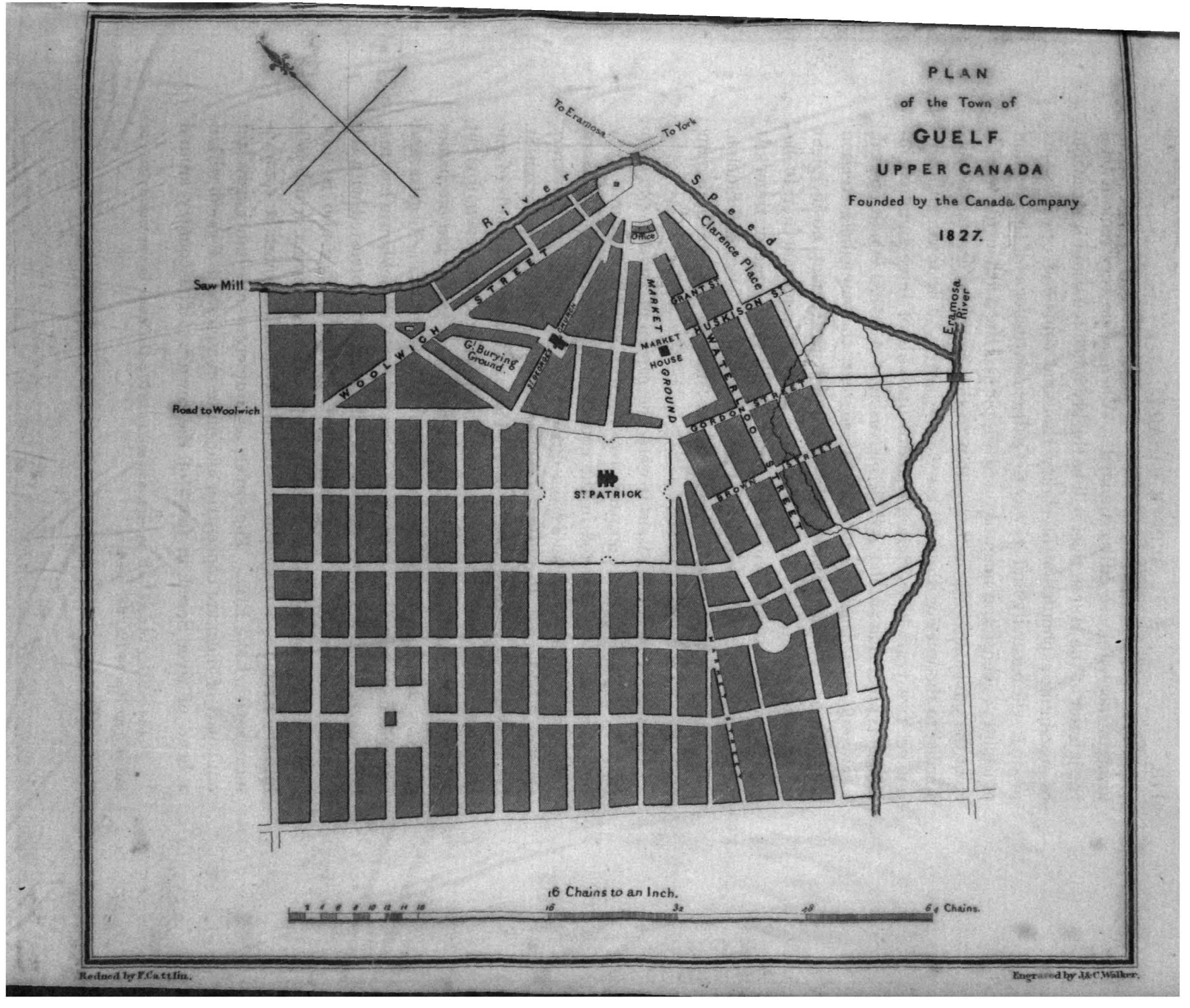
In the township of Godrich, a town has been laid out on the borders of Lake Huron, and at the mouth of the river Maitland, from which a road is opened to join Talbot Road North, and another has been traced, communicating eastward through Wilmot and Guelph, with the head of Ontario. The town is very judiciously planned, and peculiarly well situated, upon the elevated shores of the lake, and on the southern side of the harbour formed by Maitland river. This harbour is capable of affording safe shelter to vessels of two hundred tons' burden, and is well calculated to admit hereafter of the construction of quays, to facilitate the loading and unloading of produce and merchandise. The river Maitland, of which a partial description has been given in a preceding chapter, affords of itself many important advantages, arising out of the numerous sites that it presents for the erection of mills of every description, and likewise from the excellence of the fish with which it abounds. The lake is equally well stored, and yields especially great quantities of sturgeon. The broad expanse of its beautifully transparent waters, whilst it adds to the interest of the locality, and favourably influences the atmospheric changes, affords an advantageous means of forwarding and receiving goods, to and from the lower extremities of the province, through the straits, lakes, and canals, by which, in fact, an uninterrupted water communication is opened to the Atlantic Ocean.

Thus circumstanced, it is impossible not to contemplate an early period at which Godrich must acquire a considerable degree of commercial consequence; especially when the exertions of the Company,

hitherto successful, are duly estimated. When, at no very remote date, the interior of the Huron tract will be thickly inhabited—and it is capable of sustaining a population of eighty thousand souls and upwards—its produce will naturally find its way to Godrich, as the focus of that section of country; whilst the manufactured supplies of the settlements would, from the advantages of the navigation to that town, be constantly forwarded to the interior through the same quarter. The town, although not yet two years in existence, contains upwards of three hundred inhabitants; and this number is daily increasing. A tavern is now opened, a saw-mill erected, and a grist-mill in progress: the immediate erection also of a brewery and distillery is contemplated. In fact, no incipient colony ever promised to rise in the same ratio of importance, or to become more flourishing, within a comparatively brief lapse of time. It will be a competitor for rapidity of growth with By Town and Guelph, that have risen mushroom-like above the surface, and are both now populous and improving places.

The town of Guelph is, as it were, the capital of another extensive tract belonging to the Company, covering in superficies about forty thousand acres, and situated in the county of Halton, district of Gore. The town was founded under the direction of a distinguished literary character, John Galt, Esquire, the first secretary to the Company, on St. George's day, at so late a date as 1827, and now contains upwards of one hundred dwelling-houses, several shops and taverns, and seven or eight hundred inhabitants, amongst whom are found tradesmen and mechanics of every description requisite in an infant settlement. A grist and saw-mill have been for some time in operation: a school-house has just been erected, and a teacher appointed, who is already intrusted with the education of thirty or forty children: a printing-office also is now established. The town is well situated upon the river Speed, which falls into the Eramosa, a branch of the Grand river, and through it communicates with Lake Erie. The streets are numerous and judiciously laid out: part of them are concentric, and unite in a crescent formed within a bend of river Speed in front of the town*. The country around

* The building lots are half an acre, and sell for £10; the farms in the vicinity may be had at from 10*s.* to 12*s.* 6*d.* per acre.


PLAN
of the Town of
GUELF
UPPER CANADA
Founded by the Canada Company
1827.
To Eramosa
To York
River Speed
Office
Clarence Place
Saw Mill
STREET
MARKET
GRANT ST.
HUSKISON ST.
Eramosa River
WOOLWICH
G! Burying Ground.
MARKET HOUSE
GROUND
WATERLOO STREET
GORDON STREET
Road to Woolwich
ST PATRICK
BROWN STREET
16 Chains to an Inch.
16
32
64 Chains.
Reduced by F.Cattlin.
Engraved by J&C Walker.

Guelph enjoys most of the advantages of the Huron tract in respect of climate and fertility; but a nearer proximity to the older settlements of the province, give it probably a superiority of relative local situation.

Guelph and Godrich are decidedly rivals: each possesses certain advantages over the other which will for some time render their prosperity co-equal; but it is believed that the position of the latter on the shores of a great lake, accessible as it is to large vessels, and having a good harbour to protect them—superadded to the advantageous circumstance, of being at once made the focus of populous settlements, that will soon be flourishing around—will eventually give it the ascendancy.

The little town of Galt is seated on the banks of the Grand river, in the township of Dumfries, and about seventeen or eighteen miles from Guelph. It is another of the villages founded by the Company; and however its importance may be considered secondary, as compared with the other towns, its situation is peculiarly eligible, and cannot fail to attract many settlers of respectability and capital.

Upon an inspection of the general geographical map of the British Empire in North America, accompanying this work, it will be seen that the Canada Company holds large tracts of land in almost every township of the province *, exclusive of the Huron territory and other extensive blocks. It may, therefore, be safely asserted, that the Company have at their disposal a vast and valuable portion of the colony, embracing, from its singular distribution, every possible variety of surface, soil, timber, and climate which that section of the king's dominions affords. It cannot, therefore, be doubted that the sphere of their settlements will soon be co-extensive with the province itself; and that from the impulse given by them to emigration, and the accelerated march in which their settlements are advancing, the landed property of the country will almost suddenly become greatly enhanced in value. It is probable, that, before the lapse of five years, lands that may now be obtained upon terms extremely moderate, even as sections of a forest, will cost treble what they now do, owing to the extraordinary demand that has been created for lands, by the encouragement held out by the government and

* The townships of Upper Canada, in which the Company holds lands, are distinguished on the map by an asterisk *.

the Canada Company to emigrate to Upper Canada; and this increased value of the land is the more to be anticipated from the geographical situation of that province. That section of it which is most desirable for settlement is by no means unlimited or exhaustless, and may probably be confined, northward, by a line drawn from the head of Lake Chaudière, on the Ottawa, to Matchedash Bay, on Lake Huron, which includes, to the southward, all the organised and surveyed parts of the province, so much of which has already been stated to belong to the Company. Thus circumscribed, with a population whose natural increase is great, and whose adventitious increase is far greater, every acre of ground must daily acquire a high degree of augmented appreciation. The growth of Upper Canada, we believe, is unprecedented for its rapidity, in the annals of colonization; but it must be considered, that few countries in the world can compete with it as a field for new settlement. Few sections of the earth are so especially endued by nature with richness, exuberance, and fertility, with bright and pure skies, a salubrious atmosphere, a climate calculated to ripen luxuriant fields, and mature delicious fruits; in fact, endowed with all the advantages that can render any spot eminently desirable as the abode of man, or rivet his affections to the soil.

The Canada Company have done much, to promote the welfare of the settlements of the colony, and it appears to be their inclination, as well as their interest, to do more. The number and respectability of the settlers for whom they have provided on their immense demesnes, have already added considerable strength to the country, whether in a physical, moral, or political point of view. The accession to the population of the province accruing by emigration from the united kingdoms, transfers so much loyalty to the opposite shores of the western ocean; especially when that emigration is under the direct influence and guidance of an association of British capitalists, whose studious endeavours, consistently with the appropriate badge of their incorporation, "*Non mutat genus, solum,*" must be to foster British feeling in the remotest regions of the empire.

From their general applicability to the subject, the Instructions to Emigrants, printed at the back of the Company's prospectus, have been thought entitled to a place in the Appendix at the end of the volume, where they will be found under the No. 2.

CHAPTER VI.

Government—Constitution—and Courts of Law

ANTECEDENTLY to 1791 the administration of the government of the province of Quebec, which was co-extensive with Lower and Upper Canada, was peremptorily vested, under the provisions of an act passed by the British parliament in 1774, in the government and council only. By this act, the catholic religion was not only tolerated in its plenitude, but the tithes and other ecclesiastical privileges confirmed to the clergy of that persuasion; the English law was established in criminal matters, and the French law declared to prescribe the rule of decision where the rights of property were concerned.

In 1791, as was before mentioned, the province of Quebec was divided into Upper and Lower Canada, and the land before established in French seigniories and that recently allotted to the new settlers were separated and distinguished as before alluded to; the former falling within the Lower, whilst the latter constituted the Upper province.

The basis of those institutions by which Upper Canada is now governed was laid by an act of the British legislature, 31st Geo. III., which invests the supreme power in a legislative council and an assembly, conjointly with the king, under the denomination of the Provincial Parliaments. The council must consist of seven members at the least, but the crown has the power of increasing this number. The members are appointed by the crown: they must have attained the age of twenty-one years, and be British subjects either by birth, by naturalization, or by the conquest and cession of Canada. They are appointed for life, but may forfeit their place by treason, by swearing allegiance to a foreign power, by two years' absence from the colony without permission of the governor, or four years' absence without the sanction of the king.

The speaker of the council is appointed by the governor, lieutenant-governor, or other person administering the government, and may be removed by the like authority.

The assembly is composed of not fewer than sixteen members, chosen by the electors of districts, counties, circles, or townships, in a proportion to be declared by the governor, but afterwards alterable by decision of the provincial parliament. Subsequent provincial acts have increased the number of both councils, and have fixed that of the assembly at forty. The districts returning members are differently constituted; some consisting only of a single county, others of two counties, a riding, or a county and a riding together. The qualifications of the electors are ascertained by the same act; which fixes the age of an elector at twenty-one, requires the same qualification of allegiance as in a member of the council, and, providing for some contingencies which have never occurred, ascertains, that to vote in a *district* election the elector must possess a freehold in the *district* of the clear annual value of forty shillings. Voters, before admission to the poll, are required to swear that they have not before voted at the same election. This enactment raised the question of the right of Quakers to vote, that people, as is well known, being prevented by religious scruples from taking an oath; but this has been decided in the same equitable spirit that governs the jurisprudence of Great Britain, and the affirmation of those persons admitted as equivalent to an oath.

To be eligible as a member, the candidate must be twenty-one years of age, a British subject by birth, naturalization, or the conquest and cession of Canada; and he must not be a member of the legislative council, nor "a minister of the church of England, or a minister, priest, ecclesiastic, or teacher, either according to the rites of the church of Rome, or under any other form or profession of religious faith or worship." A doubt for some time subsisted whether this disqualifying clause extended to laymen occasionally acting as religious exhorters; but the decision of the assembly in the cases of Messrs. Roblin and Wilson, which upon that ground excluded those members from their seats, seems to have definitively settled the point. The provincial parliament has the power of prescribing disqualifications by its own act; by one of these,

passed in 1795, it was declared that any person coming into the province from a place not under his majesty's government must have resided seven years, which period by an act passed in 1814 is extended to fourteen years, and the most recent enactments require that his property should comprise four hundred acres of land free from incumbrance, to render him eligible as a member of the assembly.

The provincial legislature seems to have involved itself in a sort of anomaly by its decision with regard to Quakers offering themselves as candidates for the representation; for though in the case of an elector their affirmation is admitted in lieu of an oath, as a member it has been rejected, and that valuable portion of society excluded from all share in the legislation of the colony.

A new assembly is called by proclamation of the governor, who fixes the time and place, and appoints the returning officers, to whom he issues writs of election, returnable in fifty days.

When a petition is presented against the return for any district, it is to be taken into consideration by the assembly in a period not less than fourteen days from its presentation, notice of which is given to the petitioners and the sitting members, and the members of the house present are sworn to decide according to the evidence.

The duration of the assembly is four years; but it may at any time be either prorogued or dissolved by the governor, who appoints the time and place of session, but is obliged by law to do so at least once in every year. The prorogation continues no longer than forty days, and must be prolonged from time to time by repeated proclamations. The time of meeting for the transaction of business is communicated to the members by letter, nor can the session commence till opened by the governor. The assembly elects its own speaker, subject to the approbation of the governor, and lays down its own rules and orders, referring in cases for which they have omitted to provide, to those which govern the commons of the mother country. To constitute a law, a bill having passed the house of assembly and council, must receive the assent of the lieutenant-governor in the name of his majesty, an assent which it is in his discretion to withhold, or to reserve till after a communication with the government at home. In the latter case, the royal assent may be signified at any time

within two years, and from that time the law takes effect. His majesty has likewise the power of disallowing any law within the period of two years from its adoption, which ceases to be a law from the time that his pleasure is made known. There are certain subjects, of which religion is the principal, on which no law can be passed without the consent of the two houses of the British parliament, ratified by the king. The right of passing laws for the taxation of the province is exclusively and expressly reserved to the provincial legislature.

As in the mother country, the executive power is vested exclusively in the king, or his representative, the lieutenant-governor; that representative appointed by the crown, as are his principal officers, the members of the executive council, the judges of the court of king's bench, and all officers at the heads of departments. The lieutenant-governor is assisted in his administration by a council, appointed by the crown; and all petitions addressed to him are, *To his Excellency in Council*, in which style run also all orders and documents made thereon.

The principal court of law subsisting in the colony is the court of king's bench, consisting of a chief justice and two puisne judges; the jurisdiction of which combines those of the courts of king's bench and common pleas in England, and, as respects matters of revenue, even that of the exchequer; holding four regular terms in a year. An appeal lies from its decisions, by writ of error, to the court of appeals, composed of the governor and his council, but only in causes where the matter in dispute amounts to one hundred pounds, or is some annual rent or duty; and from this judgment there is an ultimate appeal to his majesty in council, where the subject in question is of five hundred pounds' value. There are also two circuits, the eastern and western, of assize and nisi prius, to each of which a judge of the king's bench is appointed, associated in the commission with some principal gentlemen of the district. Besides these, there are district courts, whose jurisdiction extends to all simple contracts under the value of forty pounds; to questions of personal property and trespass; but not to any cause involving a title to land. Quarterly sessions are likewise holden in each district, by the justices of the peace, for the trial of misdemeanors and petty offences, with the regulation of the general police. Courts of request, principally analogous to those

which regulate such courts in Great Britain, sit twice in each month, under the presidency of two justices of the peace, for the trial of petty causes under forty shillings' value. A probate court for the province, with a surrogate court in each district, a board of land commissioners, having jurisdiction over claims to lands granted by the crown, complete the list of tribunals invested with the judiciary authority in this province. In noticing the original constitution of the province, it was mentioned that the English law was established as the basis of the criminal law of Upper Canada; and in all respects the laws of England regulate the decisions of the courts, so far as such laws are applicable to the circumstances of the province, or are not superseded by provincial statutes.

CHAPTER VII.

The River St. Lawrence.—The Great Lakes.—The Gulf.—Canals.

THE St. Lawrence, originally called the Great River of Canada, or the Great River, to mark its pre-eminence, is the indelible link formed by nature between the Canadas, and the source at once of the wealth, beauty, and prosperity of both provinces. In passing, therefore, from the topography of Upper to that of Lower Canada, the description of that splendid river seems naturally to suggest itself as a typical illustration of that link. The introduction of it here, from the circumstance of its following the account of one province, and immediately preceding the description of the other, will at the same time enable the reader the more easily and intimately to associate the topographical features and characters of each province with the utility, magnificence, and grandeur of that gigantic stream.

The St. Lawrence, though not the longest river in the world, is certainly the largest in every other respect, if, as appears proper, its immense lakes be considered to form part of it. Under this aspect it will be found that the surface it covers, and the cubic mass of its waters, far exceed those of the Amazon or the Mississippi, but it probably does not carry to the ocean a greater volume of water than either of these two majestic streams. The source of the river St. Lewis, which may be deemed the remotest spring of the St. Lawrence, is in latitude 48° 30′ north, and longitude about 93° west. From its source the general direction of the St. Lawrence, through Lakes Superior and Huron, is south-east to Lake Erie, nearly due east through that lake, and then north-east to the Gulf, through which its waters are mingled with the

Atlantic Ocean, after an uninterrupted course of upwards of two thousand statute miles.

The St. Lawrence receives nearly all the rivers that have their sources in the extensive range of mountains to the northwards, called the Land's Height, that separates the waters falling into Hudson's Bay still further to the north from those that descend into the Atlantic, and all those that rise in the ridge which commences on its southern bank, and runs nearly south-westerly until it falls upon Lake Champlain. Of these, the principal ones are the Thames, Ouse, or Grand river, the Ottawa, Masquinongé, Saint Maurice, Batiscan, Saint Anne, Jacques Cartier, Du Gouffre, Saguenay, Betsiamites, and Manicouagan on the north; and the Salmon river, Chateaugay, Chambly or Richelieu, Yamaska, St. Francis, Nicolet, Becancour, Du Chêne, Chaudière, du Sud, du Loup, Matanne, and Mitis on the south. In different parts of its course it is known under different appellations: thus, as high up from the sea as Montreal, it is called St. Lawrence; from Montreal to Kingston in Upper Canada, it is called the Cataraqui, or Iroquois; between Lake Ontario and Lake Erie it is called Niagara river; between Lake Erie and Lake St. Clair, the Detroit; between Lake St. Clair and Lake Huron, the river St. Clair; and between Lake Huron and Lake Superior, the distance is called the Narrows, or the Falls of St. Mary.

LAKE SUPERIOR.

Lake Superior, without the aid of any great effort of imagination, may be considered as the inexhaustible spring from whence, through unnumbered ages, the St. Lawrence has continued to derive its ample stream. This immense lake, unequalled in magnitude by any collection of fresh water upon the globe, is situated between the parallels of 46° 25′ and 49° 1′ north latitude, and the meridians of 84° 34′ and 92° 14′ west longitude. Its length, measured on a curved line through the centre, is about three hundred and sixty geographical miles, its extreme breadth one hundred and forty, and its circumference, in following the sinuosities of the coasts, about one thousand five hundred*. Its surface is about

* These dimensions, as well as other particulars relative to Lake Superior, are taken from the able and scientific paper presented to the Literary and Historical Society of Quebec, together with a valuable collection of geological and mineral specimens, by Captain Bayfield,

six hundred and twenty-seven feet above the tide-water of the Atlantic; but the shores exhibit almost conclusive inditiæ of its having been, in former ages, as much perhaps as forty or fifty feet higher than its present level. Various soundings have been taken, from eighty to one hundred and fifty fathoms; but its greatest depth probably exceeds two hundred fathoms, thus demonstrating the bottom of the lake to be nearly six hundred feet *below* the level of the ocean. The crystalline transparency of its waters is unrivalled, and such as to render rocks, at extraordinary depths, distinctly visible. The bottom of the lake chiefly consists of a very adhesive clay, which speedily indurates by atmospheric exposure, and contains small shells of the species at present existing in the lake.

A sea almost of itself, this lake is subject to many vicissitudes of that element, for here the storm rages and the billows break with a violence scarcely surpassed by the tempests of the ocean; but it is not subject to the oceanic phenomenon displayed by an unerring and periodical flux and reflux. Its expansive surface, however, yields to the influence of heavy winds; so that when these blow strong from one quarter, they produce a very perceptible rise of the lake in the opposite direction. The spring freshets are also known to have occasioned a rapid swelling of the waters, which has been especially conspicuous after a rigorous winter. That its waters were once salt is by no means unlikely; and the supposition stands in some degree supported by the nature of the fish that inhabit them, and the marine shells that are found along the beaches, or imbedded in the shores.

The basin of Lake Superior is considerably larger than the area its waters now occupy. It may be said to be bounded by the surrounding mountain ridges, in which are found the sources of the rivers that are tributary to the lake. These bounds are at various distances from its actual shores, receding from them at some points to the distance of fifty or seventy miles, and at others approaching very near, or forming the margin of the lake itself. The summits of the hills rise, in some

Royal Navy. The extensive hydrographical surveys of that scientific officer are an important accession to the geography of the Canadas, and from the abilities and research of the operator have also been the means of extending considerably the knowledge of various branches of the natural history of both provinces.

instances, to an elevation of one thousand five hundred feet above the lake, as trigonometrically ascertained by Captain Bayfield; and the sources of some of the rivers flowing into the lake have been estimated by Mr. Schoolcroft and Dr. Bigsby to be from five hundred and five to six hundred and fourteen feet higher than the level of their mouths. The rivers discharging themselves into Lake Superior are indeed numerous, but none are remarkable for their length, although several of them are fine broad streams, pouring ample stores into the bosom of this immense recipient. On its north and north-east sides are several islands, the largest of which is called Isle Royale, measuring about one hundred miles in length by forty in breadth.

The outlet of Lake Superior is the Strait of St. Mary, about forty miles long, connecting the south-eastern extremity of that lake with the north-west angle of Lake Huron. The Falls of St. Mary are nearly midway between the two lakes. This denomination, though generally given, but little accords with the usual appellation of Falls as applied to the descent of large bodies of water precipitated from great heights, that so frequently occur on the rivers in America. In this place it is only the impetuous stream of the enormous discharge from Lake Superior forcing its way through a confined channel, and breaking with proportionate violence among the impediments that nature has thrown in its way; yet this scene of tumultuous and unceasing agitation of the waters, combined with the noise and dazzling whiteness of the surge, is not deficient either in grandeur or magnificence. The total descent of the fall has been ascertained to be twenty-two and a half perpendicular feet. It has been found impracticable to ascend the rapid, but canoes have ventured down, although the experiment is extremely nervous and hazardous, and in general avoided by means of a portage about two miles long which connects the navigable parts of the strait.

Below the discharge of St. Mary's Strait are situated the islands of St. Joseph and Drummond; the former of which is under British dominion, and the latter within the limits of the United States. There are upon each a small military detachment and depôt, maintained by the respective governments, which are the most remote stations, at least on the British side of the frontier, where a military force is maintained.

These islands abound with curious mineralogical specimens, fossils, and petrifactions, many of which are to be seen in the museums of the Natural History Society in Montreal, and the Literary and Historical Society of Quebec.

LAKE HURON.

Lake Huron yields in its dimensions to Lake Superior only. It is very irregular in shape, yet with the assistance of a little fancy may be formed into something like a triangle, having its base to the north, and its opposite angle at the source of the St. Clair river, which is its outlet to the south. Its greatest length on a curvelinear line between the discharge of St. Mary's Strait and the outlet, is about two hundred and forty miles; its depth, due north and south, one hundred and eighty-six; and its extreme breadth, nearly W. N. W. and E. S. E., about two hundred and twenty. In circumference it will be found not far short of one thousand miles. From the head of river St. Clair its coast to the west trends first north-eastward about thirty-five miles, then stretches northward about one hundred and fifteen to Cape Hurd, which terminates the west point of Cabot's Head, a peninsula averaging twelve miles broad, and protruding fifty miles into the lake. From Wingfield Point on the east, corresponding with Cape Hurd on the west, the coast breaks to the south-eastward, forms Nattawassaga Bay, and then, after admitting the waters of Lake Simcoe, reascends northerly to the 46th degree of north latitude, much broken and indented, and fringed by a multitude of islets. At this point the lake receives the waters of Lake Nipissing through the French river; the shore thence bends to the west, continuing that general direction till it strikes the Strait of St. Mary, beyond which is the broad strait of Michilimackinac, the outlet of Lake Michigan into Lake Huron, or rather the link by which both lakes are united, for it is believed there is little or no difference of elevation in their relative levels. The coast then swelling out eastwardly takes a southerly course to the bottom of Saguenam Bay, reascends on the eastern side of it about forty miles, and then trends again southward to the head of river St. Clair.

The surface of Lake Huron is about thirty-two feet lower than that of Lake Superior, and thirty feet above the level of Lake Erie. It is

nearly as deep as the former; and its water is equally cold, transparent, and pure. From its western side a series of extensive islands called Manitoulin, of which St. Joseph and Drummond's Islands already mentioned form part, stretches in an easterly direction one hundred and twenty miles. One of these islands is upwards of seventy-five miles long, and varies in width from three miles to twenty-three, being singularly indented by deep inlets and coves that give it an extremely irregular and broken outline. A superstitious veneration is attached to these islands by the Indians, who believe them to be consecrated by the presence of the Great Spirit, or, in their own language, the "*Great Manitou*;" and hence has originated the appellation they still bear. Between this principal chain and the north shore is comprised a section of the lake almost completely cut off from the main body, in which are scattered many other islands of inferior size; whilst another group, extending from Cape Hurd to the southern angle of the Great Manitoulin Island, forms together the Manitoulin series, a kind of archipelago that confines the lake to the northward. Combined with Cabot's promontory or peninsula, this archipelago separates from the lake a large body of water constituting, as it were, an inner lake, whose extreme length, from Nattawassaga Bay, on the S.E., to the mouth of the Narrows or St. Mary's Strait, on the west, is about two hundred and twenty-five miles, and its greatest breadth about fifty.

Several rivers and numerous minor streams descend from all sides to level the bosom of the lake. But although the Maitland, Severn, Moon, and French rivers, which are those most worthy of being enumerated, flow in ample streams, it is probable that they do not together pour into the lake more water than is discharged by the Falls of St. Mary alone. The shores of Lake Huron are generally barren and broken, especially towards the north, where a bold ridge of hills, called the *Cloche* Mountains, are conspicuously to be seen, extending about forty miles along the coast, and exhibiting distinctly three or four lofty summits. Clay cliffs, rolled stones, abrupt rocks, and woody steeps, of various elevations, from thirty to eighty or one hundred feet in height, constitute the general characters of the coast in most parts of the lake:

but the lands above these forbidding shores are frequently of an excellent quality, especially to the eastward.

This lake is centrically situated between its rivals, Lakes Superior, Michigan, Erie, and Ontario, with all of which it has a direct communication. By St. Mary's Strait it communicates with Lake Superior; by Michilimackinac with Michigan, and through it with the waters of the Illinois; by the river and Lake St. Clair, and the Detroit, with Erie; and by Severn river and Lake Simcoe, then a short portage, a chain of lakes, and Trent river, with Ontario. There are, besides, two known water communications with the Ottawa; one of which, explored by Mr. Catty, of the royal engineers, in 1819, ascends from Lake Simcoe through a chain of lakes and their connecting waters, to the height of land, over which a portage is made to the source of the Madawasca, which falls into the Lake of the Chats. The other is up French river into Lake Nipissing, and thence down a rapid river into the Ottawa, where it discharges itself near a place called Mataouin. This is the route in general adopted by the north-west traders in proceeding to the remote parts of the country, and the point at which they traverse from the waters of the Ottawa to those of the St. Lawrence.

LAKE MICHIGAN.

Lake Michigan lies exclusively within the boundary of the United States. Its position is nearly north and south, its length little short of three hundred miles, and its greatest breadth about seventy-five. In shape it is elliptical and regular, if we except a break in its western coast, formed by the entrance of Green Bay, which is about one hundred miles deep, and extends parallel with the lake, and another inferior bay on the opposite side. None of the tributaries of Michigan are of any considerable length, but they are extremely numerous; and several of them are full flowing rivers, that effectually feed the lake into which their streams are lost. From the bottom of Green Bay, boats can ascend the Ontagamis or Fox river to within two miles of the Oniscousin, to the head of which a portage is made, and a descent thence offered to the Mississippi.

The river St. Clair, a fine, clear stream, navigable for schooners, is the outlet of Lake Huron. It issues at the southernmost extremity of the lake, and flows between moderately high banks, adorned by many natural beauties, for a distance of thirty miles, when it again expands into the comparatively small lake St. Clair. Few settlements have as yet been formed along its banks; but the excellence of the lands which it traverses, and the rapid improvements of the districts in its vicinity, must bring them under early cultivation. Forts Gratia and St. Clair, on the western bank, are the only partial settlements upon the river.

Lake St. Clair occupies an intermediate position between Lakes Huron and Erie; being connected by river St. Clair with the former, and by Detroit river with the latter. It is almost circular, and about thirty miles in diameter. The shores are low, level, and generally in a state of nature; a few straggling habitations, humble in their structure, studded in different parts of the wilderness, being the only indications of progressive settlement. The water of the lake is generally shoal, yet sufficiently deep in the channel to admit safely of steam-boat and schooner navigation. Its surface is much contracted by a group of flat islands to the northward, produced by alluvial accumulations from the discharge of the St. Clair, by which numerous channels are formed to approach the mouth of the river, the principal one being that called the *Old Ship Channel.* Lake St. Clair receives two large rivers from the eastward, the Thames and the Great or Big Bear, which we have formerly described, besides several streamlets and brooks. It discharges itself by the Detroit.

Detroit river, properly the *Détroit* or Strait, directs its course out of the lake, first to the westward, and thence, bending in a regular curve, flows about due south to its influx into Lake Erie. It is twenty-nine miles in length, broad and deep, and divided into two channels for a great part of its course by elongated islands, the largest of which are Grosse Isle, within the American lines, eight miles long, and Turkey Island, further up, within the British boundary, in length about five miles. Isle au Bois Blanc, belonging to Upper Canada, is not more than one mile and a half long, but its situation is important. It is nearly opposite Amherstburgh, and divides the channel between Grosse Isle and the east bank of the river, leaving the deepest channel to the eastward, and commanding the entrance of the river. The Detroit is navi-

gable for vessels of any size employed upon the lakes, and offers at Amherstburgh an excellent harbour. The banks of the river are of moderate elevation, and in a high state of culture, exhibiting very pleasing and picturesque prospects, in which are combined fertile fields and gardens, numerous orchards, neat and frequent dwelling-houses, and extensive barns, the objects being at the same time so agreeably grouped or distributed as to give much interest, diversity, and beauty to the landscape. Sandwich and Amherstburgh * are the only two towns of any consequence upon the British side; Detroit the most important place, as to population, upon the opposite shore. The latter town contains about two hundred and fifty houses, a protestant and catholic church, a few buildings belonging to government, and wharfs on the river. Among the inhabitants there are many old Canadian settlers. The fort and military works at this place are strong. They were taken by the British forces under General Brock in 1812, when General Hull surrendered himself and his army prisoners of war.

LAKE ERIE.

Lake Erie receives the Detroit on its northern shore, about thirty miles from its western extremity. This lake lies about north-east and south-west, between 41° 30′ and 42° 52′ north latitude and 78° 53′ and 83° 25′ west longitude; is about two hundred and sixty-five miles long, sixty-three miles and a half broad at its centre, and six hundred and fifty-eight miles in circumference. Its surface is calculated to be five hundred and sixty-five feet above the nearest tide-water of the ocean; and its greatest depth varies from forty to forty-five fathoms, with a rocky bottom. From its northern coast several extensive promontories † project into the lake to considerable distances, and render its navigation more difficult than that of the other lakes, by occasioning a diversity of bearings. For instance, in leaving Fort Erie, or Buffalo, the course lies west-south-west, about two hundred and fifty miles, to the St. George or Bass Islands; thence northerly to Amherstburgh, and westerly to the head of the lake. A very perceptible current, that runs constantly down

* See p. 105.

† For a description of these promontories or points, and of the north shore generally, see pp. 103, 104.

the lake, and the prevalence of south-west winds, also add to the difficulties of the navigation in proceeding westward.

The islands of the lake are entirely confined to its western quarter. These are Pélé and Middle Islands, the Hen and Chickens, and the East and Middle Sisters, on the British side the line; and Cunningham and Slate Islands, the Bass Islands, and the West Sister, within the United States' limits.

The southern shore of the lake falls exclusively within the territory of the United States. At its eastern extremity are Black Rock and Buffalo, which were destroyed during the war; but they have since been rebuilt, and have made the most rapid progress in improvements and population. From Buffalo up to the Detroit, the shore of Lake Erie is generally low; except near the portage of Chataughque, where for a short distance it is rocky and bold; and between Cleveland and the Reneshoua river, where the cliffs rise almost perpendicular nearly twenty yards above the water's level, and so continue until they approach the River Huron. Along this side of the lake there are but few points meriting particular notice. The entrance of Cataragus Creek affords a good harbour for boats, whence there is a road to the interior. Presqu'ile harbour is situated opposite to the North Foreland, or Long Point, and formed by a sandy beach or narrow peninsula stretching a great distance, and covering it from the lake. In form it bears so strong a resemblance to York harbour on Lake Ontario, that the same description would apply almost equally well to both places, with the difference, that the latter opens to the south-west and the former to the north-east. The breadth of it is about a mile and a half, but it runs inward nearly three miles. The entrance is not more than half a mile wide, with a bar across it, on which there is in general not more than six or seven feet water.

The town of Erie is seated on the south side of the harbour. It is of a respectable size, well laid out, and the streets regular. The houses altogether amount to three hundred, with a church, court-house, and a public prison. Eastward of the town stands a strong battery, and on the point of the peninsula a large blockhouse, which together completely defend the harbour. At this town there is a dockyard, with store-

houses, wharfs, &c. forming the American naval depôt on the lake, and at which they have built and equipped brigs mounting twenty guns. A road leads from it by Fort Le Bœuf to Meadsville and Fort Franklin, on the Allegany river, and another by the margin of the lake to Buffalo. A little south-west of Erie is the small village of Lichfield, whence a road continues by the lake-side to Ralphsville, and by the Ashtabula river down to Jefferson and Austinburgh, from which place another proceeds to the towns of Warren and New Lisbon.

From a small settlement called Newmarket, on the east side of Grand river, a road goes to Cleveland, thence turns off to New Lisbon, and continues on to Fort M'Intosh on the Ohio river. From Cleveland there is a very good road to Sandusky, that proceeds on to the old Fort Miami. Half a mile beyond it is Fort Meggs, a place of some strength, and mounting eighteen guns during the war. The two bays of Sandusky and Miami afford good anchorage and shelter, as do most of the islands at the west end of the lake. In Cunningham's Island, is a fine harbour called Put-in Bay, open to the north, and very well sheltered, with excellent anchorage. It is nearly of a circular form, and the entrance to it not more than a quarter of a mile wide, having on the western side a narrow rocky point about forty feet high, but where it joins the island the isthmus is so low as to be generally overflowed. From the point a blockhouse and strong battery defend the harbour. The English ships Queen Charlotte and Detroit were carried in here after their capture, when the British squadron was defeated by an American armament of much superior force.

The invaluable advantages enjoyed by Lake Erie from its geographical position and relative connexion with surrounding navigable waters, and the scene of commercial animation it exhibits, are so correctly described in a Journal published at Buffalo, that we cannot do better than give the following extract from it. "It is peculiarly gratifying to notice the annual increase of business upon the waters of Lake Erie. The lake navigation commenced this spring (1830) much earlier than usual, and it has already assumed a degree of importance and activity unequalled by that of any former period. Besides the numerous schooners that constantly crowd our wharfs, waiting their several turns

to load or unload, seven fine steam-boats have full and profitable employment *. One of these boats now leaves our harbour every morning, crowded with freight and passengers, destined to the fertile regions of the west. It is impossible to reflect on the almost incredible increase of business upon Lake Erie for the last five or six years, without indulging in what to some may appear extravagant anticipations of the future.

"The map of the entire globe does not present another sheet of water so strikingly peculiar as that of Lake Erie. It literally commands the navigable waters of North America. From the south, a steam-boat has already ascended the Allegany to Warren; and a trifling improvement of the Chatauque outlet will enable steam-boats from New Orleans to approach within three miles of Portland harbour. From the north, the vessels of Lake Ontario have already visited Lake Erie, through the Welland Canal and river. The same spirit of enterprise that produced the Welland Canal, it is believed, will soon be enabled to overcome the natural impediments to the navigation of the St. Lawrence, and open an easy and uninterrupted communication from Lake Erie, through Lake Ontario, to Montreal and Quebec. The ease with which a canal of sufficient capacity to pass steam-boats can be opened between Lake Michigan and the navigable waters of the Mississippi is well known. This enterprise has been long agitated, and will, it is believed, soon be accomplished. But this will not be the only channel of intercourse between Lake Erie and the Gulf of Mexico. From the southern shores of Lake Erie, the Ohio and Pennsylvania canals will open a communication through the Ohio river to the Mississippi.

"Lake Erie, therefore, may be regarded as a great central reservoir, from which open in all directions the most extensive channels of inland navigation to be found in the world; enabling vessels of the lake to traverse the whole interior of the country, to visit the Atlantic at the north or in the south, and collect products, the luxuries and wealth of every clime and country."

* Previous to the opening of the Grand Erie Canal, there were not more than twenty vessels in the lake. In less than three years after there were two hundred and eighteen.—*General View of the Welland Canal, by Captain Creighton.*

The Niagara river commences at the extreme north-east point of Lake Erie, and is the only outlet through which its waters pass into Lake Ontario, from thence to the broad bed of the St. Lawrence, and ultimately to the ocean. From its efflux out of Lake Erie to its discharge in Ontario, its general course is from south to north. It is thirty-three and a half miles long by the bends of the river, but the direct distance scarcely amounts to twenty-eight. No one section of water on the globe, of so limited an extent, could most probably be found to combine at once so many objects of interest, intrinsic or adventitious, as are blended in the Niagara. It traverses a district unrivalled for its richness and fertility, constitutes the frontier between two foreign states, and discloses various phenomena in its course that are justly ranked amongst the sublimest of the natural wonders of creation.

In descending the Niagara, we have on our left Upper Canada, and on our right the state of New York. It first assumes the character of a river at Fort Erie, where its width is one mile; but soon contracting its bed, opposite Black Rock, to something less than half a mile, it becomes rapid, until, expanding again to its original dimensions, the current flows on with more gentleness. From the foot of this rapid the river is divided into two channels by four successive flat islands, included within the American limits; the two first and smallest being Squaw Islands, the others Snake and Strawberry Islands. Below the latter, whose northern point is six miles and a half below Fort Erie, the banks of the river respectively diverge north-east and south-east to an extreme distance of upwards of six miles, and sweeping round to their approach again embosom Grand Isle. This extensive island covers a superficies of 11,200 acres, and, together with all the other islands of the Niagara, except Navy Island, has been attached to the United States' territories by the decision of the commissioners, under the sixth article of the treaty of Ghent. It is remarkably well wooded, and contains some settlements along its south-western shore. Of the two channels formed by Grand Isle, that to the westward is the broadest and deepest. About midway down the eastern channel is Tonewanta Island, opposite the creek of that name, which is navigable for boats twelve miles above its mouth, and used, in consequence, as part of the Grand Erie Canal. Navy Island is

at the foot of the West Channel and the north-east end of Grand Isle, the Main Channel passing between both islands. The course of the river thence, to the *détour* of the Falls, is due west, the distance three miles and a half, and its breadth rather more than one mile. At Gill Creek, near Fort Schlosher, where the portage on the American side terminates, a convenient harbour is formed for sloops navigating Lake Erie and that part of the river; and a mile and a half lower down, on the point formed by the abrupt turn of the river, are the village and mills of Manchester, opposite Goat Island. The proprietor of this singular spot has, with admirable ingenuity, contrived to connect it with the main shore, at a distance scarcely of fifty yards, above the verge of the American section of the Falls of Niagara, by a bridge, upwards of six hundred feet in length, supported by wooden piers, driven with astonishing stability amidst the impediments arising from a resistless flood of waters, moving tumultuously at the rate of nearly seven miles an hour, over an irregular and broken bed of rocks. Between Fort Schlosher and Manchester is the village of Chippewa, on the opposite bank, situated near the mouth of Welland river, and at the southern extremity of the portage on the British side.

The distance from the source of the Niagara to the head of the Falls is twenty miles, and the difference of elevation sixty-six feet; but of this height fifty-one feet descend abruptly in the space of half a mile, immediately above the Falls. The shores of the river are low, and, towards Lake Erie, so flat on the eastern side as to offer but a slender embankment. It is navigable the whole of this distance, except below Chippewa, where the rapids produced by the deep inclination of the bed of the river, and the indraught of the cataract, become too formidable to be tempted. A boat, however, can pass from Fort Schlosher, or from Chippewa, to Goat Island, by carefully keeping the slender line of rather slackened water between the foaming rapids, above the channels formed by its intervention; indeed, this nervous approach to the island was the only alternative existing before the erection of the ingenious bridge we have already noticed.

At the Falls the river forms a sharp angle, by departing from its previous course, which is almost due west, and bending suddenly to the

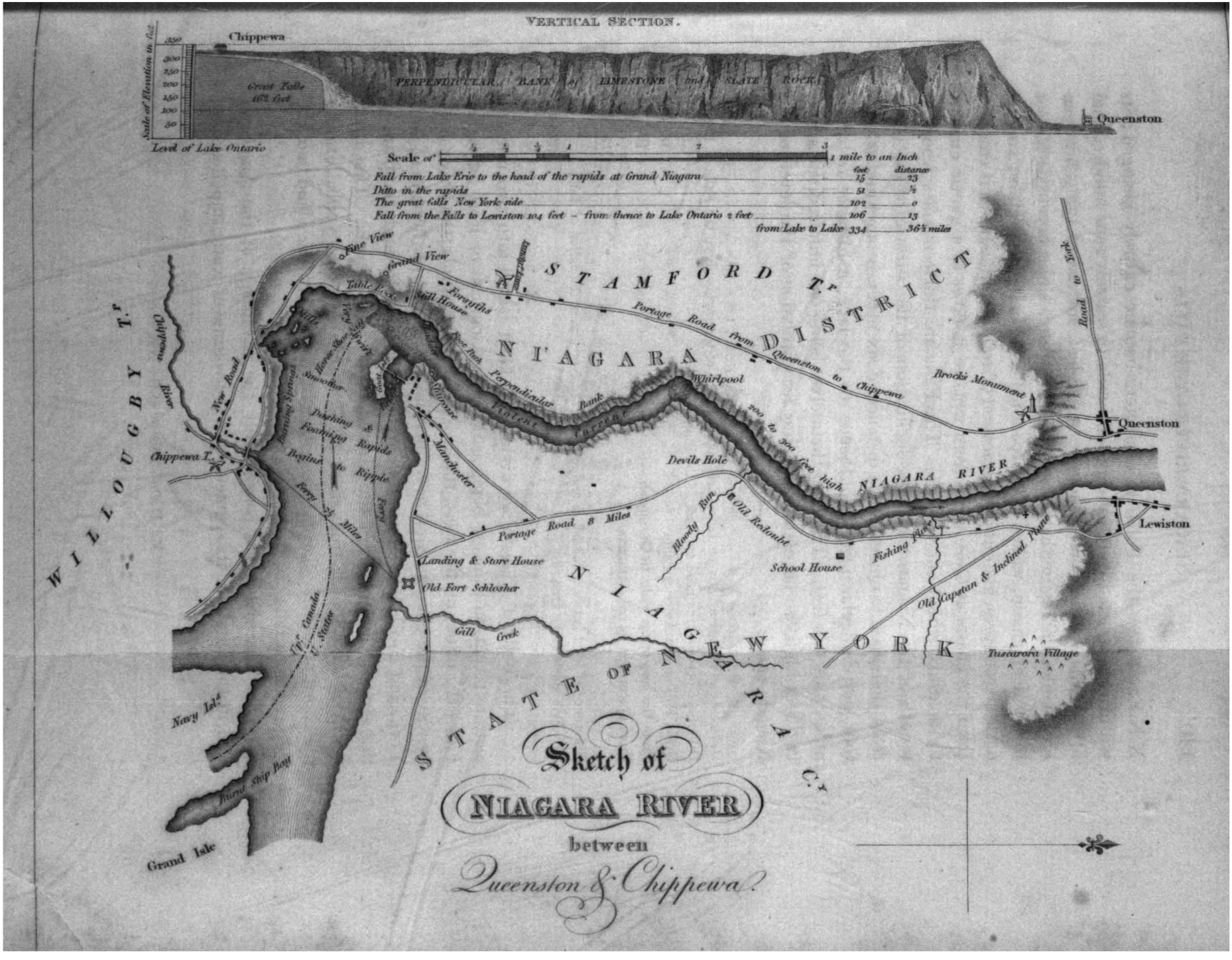
N.N.E. Below the Falls its characters become entirely changed; its width is contracted from upwards of a mile to scarcely four hundred and fifty yards, and at some points less; its bed, instead of lying between low banks smiling with the arts of agriculture, sinks hundreds of feet into a deep chasm, walled by perpendicular or impending cliffs; and its dark stream presents but one succession of toiling eddies, until it emerges from the chasm at Queenston, from whence it flows in a gentle current to its afflux with Lake Ontario. The Falls are thirteen miles from the mouth of the Niagara; and the inclination of the surface of the river, from their base to Queenston, a distance of six miles, is one hundred and four perpendicular feet; and thence to the lake, a distance of seven miles, only two feet. The Falls themselves being one hundred and sixty-two feet high, we have the following recapitulation of the levels of the Niagara river:

Difference of elevation between Lake Erie and the head of the rapids above the Falls	15 feet
Difference between the head and foot of the rapids	51
Great Fall on the American side	162
From the base of the Falls to Queenston	104
From Queenston to Lake Ontario	2
Difference of level between the efflux and afflux of the Niagara, or elevation of Lake Erie above Lake Ontario	334

The Falls of Niagara are divided by Goat Island into two unequal sections; that on the east being called the American or Fort Schlosher Fall—the other, on the west, the Horse-Shoe, or, simply, the Great Fall, by way of pre-eminence. The former lies exclusively in the state of New York, and also half of the latter; it being divided through the point of the Horse Shoe, between the United States and Canada. The direct width of the cataract, from shore to shore, is about 1100 yards, forming the chord of an irregular arc, described by the face of the island and the ledge of both falls.

The Horse Shoe has considerably the advantage of the American Fall in the length of its segment, and the volume of water impelled over

* Mr. Darby's Survey of the Niagara.


VERTICAL SECTION.
Scale of Elevation in feet
350
300
250
200
150
100
50
Chippewa
Great Falls
162 feet
PERPENDICULAR BANK of LIMESTONE and SLATE ROCK
Queenston
Level of Lake Ontario
Scale of ½ ½ ¾ 1 2 3 1 mile to an Inch
Fall from Lake Erie to the head of the rapids at Grand Niagara — feet 15 — distance 23
Ditto in the rapids — 51 — ½
The great falls New York side — 102 — 0
Fall from the Falls to Lewiston 104 feet – from thence to Lake Ontario 2 feet — 106 — 13
from Lake to Lake 334 — 36½ miles
WILLOUGBY T.r
STAMFORD T.p
NIAGARA DISTRICT
STATE OF NEW YORK
NIAGARA
Fine View
Grand View
Table Rock
Forsyths Still House
Portage Road from Queenston to Chippewa
Road to York
Chippewa River
New Road
Chippewa T.
Whirlpool
Brocks Monument
Queenston
200 to 300 feet high
NIAGARA RIVER
Devils Hole
Manchester
Portage Road 8 Miles
Bloody Run
Old Redoubt
Fishing Place
Lewiston
Landing & Store House
School House
Old Fort Schlosher
Old Capstan & Inclined Plane
Gill Creek
Tuscarora Village
Navy Isl.d
Grand Isle
Sketch of
NIAGARA RIVER
between
Queenston & Chippewa

it. It would be difficult to ascertain with certainty the exact measurement of the curvatures of the Horse Shoe, but it is computed, by geometrical process, to be seven hundred yards; and its altitude taken, with a plumb-line from the surface of the Table-rock, was found to be rather more than one hundred and forty-nine feet. The American Fall does not probably much exceed three hundred and seventy-five yards in curvelinear length; but its perpendicular height is one hundred and sixty-two feet, or thirteen feet higher than the top of the Great Fall. It is subdivided by a small island, cutting off a minor portion of the sheet of falling water, to which the name of Montmorency has been appropriated, either on account of the resemblance traced between it and that celebrated fall near Quebec, or the more strikingly to contrast its comparative insignificance with Niagara. The face of Goat Island, which intervenes between these awful cataracts, keeps them three hundred and thirty yards asunder, and perhaps adds greatly to their romantic effect and beauty, by destroying the sameness which one unbroken sheet of water would present, although the collective waters of the Niagara, thus hurled down *en masse*, might, if possible, be still more grand and astounding.

About half a mile above the cataract the river descends on a deeply inclined plane. Its surface begins to ripple a short distance below the entrance of Welland river; but soon accelerated in their career, the waters dash and foam with terrific violence, until they approach the head of Goat Island, when their convulsive agitation partially subsides, and they sweep on in a broad, ceaseless, and swift current, and are thus projected over the rock, forming a parabolic section in their appalling descent to the profound abyss into which they are ingulphed. This abysm is 200 feet deep, and about 1000 yards wide; but it soon becomes contracted to less than half that width, forming a dark, dread basin, bounded by rugged limestone and slate rock, rising perpendicularly from the surface of the waters below, or overhanging the foaming surge.

The shores of the Niagara immediately above the Falls are, perhaps, too tame in their aspect to bring forth the whole grandeur of so stupendous an object. Surrounded by towering Alpine cliffs, its overwhelming terrors could even be augmented, and its sublimity much enhanced. The islands and the eastern bank of the river are low and thickly covered

with trees, whose autumnal foliage, decked "in ten thousand dies," alters the face of nature, and, by its gorgeous tints, imparts new interest and novelty to the scenery of the Falls The western shore is bolder: an horizontal ridge is formed along the margin of the rapids by the depression of the river, commencing from the Welland, and gradually increasing in elevation above the surface of the stream from eight to eighty feet, and even attains the altitude of one hundred. The Table-rock, so famous as the spot whence a very near view may be had of the cataract, lies at the foot of this ridge, nearly on a level with the summit of the Horse Shoe Fall; indeed it forms part of the ledge over which the torrent is precipitated. Its surface is flat, and, jutting out horizontally about fifty feet, overhangs the awful chasm beneath. The access to it is down a winding path, cut through the copses and shrubbery that cover the slope of the ridge we have just described. The rock is defaced by innumerable inscriptions carved by travellers, and intersected by many crevices and fissures, some of which are nearly an inch broad. The process of disintegration is perceptibly going on; and there is little doubt that the Table-rock will eventually be hurled, section by section, into the depths of the cavern below. In the autumn of 1818 a large fragment suddenly gave way, and is now partly to be seen by the explorers of the lower region of the Falls.

The first object that meets the eye, after descending to the Table-rock, is the splendid gradation of swift rapids above the Falls; then white revolving clouds of mist, irregularly belched forth from the depths of the abyss, rush across the platform, enveloping the beholder; and as these are swept away by perpetually varying currents of air, he approaches nearer the verge of the rock, and beholds the whole length of the tremendous cataract. The loud, shrill roar of the rapids is lost amidst the appalling thunders of the Falls, which give a real or imaginary tremulous motion to the earth, and seem to threaten a disruption of the projecting rock upon which we are standing. A feat requiring considerable nerve is sometimes performed here by visiters; and we recollect fearlessly practising it in the early period of life, but would excuse ourselves from the repetition of it now. It consists in lying prostrate, with your head projected over the fall beyond the margin of the Table-rock, so as to be

able with your extended arm to saw the headlong torrent with your hand. The prodigious volume and indraught of the falling waters, the gushing spray, the bewildering noise of the cataract, your prostrate and impending attitude, and the tremor of the very rock on which you lie, render the experiment in the highest degree shuddering.

The view from this spot is extremely grand and unspeakably sublime; but it is too near and overpowering to permit the spectator fully to appreciate the whole splendour of the scene. The summit of the bank, rising about one hundred feet above the Table-rock, affords a more comprehensive and advantageous view. This position is the most commanding, and perhaps the point from whence the collective magnificence of the cataract can be seen with greatest effect.

According to the altitude of the sun and the situation of the spectator, a distinct and bright iris is seen amidst the revolving columns of mist that soar from the foaming chasm, and shroud the broad front of the gigantic flood. Both arches of the bow are seldom entirely elicited; but the interior segment is perfect, and its prismatic hues are extremely glowing and vivid. The fragments of a plurality of rainbows are sometimes to be seen in various parts of the misty curtain of the Falls.

The exploration of the inferior regions of the cataract is attended with some hazard and much difficulty; but the thirst for the romanesque and the sublime has overcome all obstacles, and led the ardent youth, the dauntless traveller, and the philosopher, a perilous pilgrimage along the slippery margin of storming eddies, beneath impending rocks, amidst jarring elements, to the foot of the deluging torrents, and even to penetrate several yards behind the concave sheet of the headlong waters. It eminently requires fortitude and self-possession to make this progress. The rocks over which we advance are sharp, broken, and excessively slippery, owing to the perpetual mossy moisture they acquire from the oozing crevices of the superincumbent cliffs and the spray, so that one inadvertent *faux-pas* might plunge a victim into the whirling and boiling vortex of the Falls. The danger is considerably increased by the terror arising from the stentorian thunders of the tumbling floods, that ever and anon resound from side to side of the humid cavern, and seem to shake the firm rock on its foundation. The difficulty experienced in

breathing from the combined moisture and compression of the air, the impossibility of hearing or being heard, the dizziness produced by the falling waters, the dimly discovered snakes and reptiles around,—the whirl, the wind, the roar, all combine most powerfully to affect the soul, to overwhelm at once the senses and the imagination, and baffle all powers of description.

Immediately at the base of the Falls the raging waters are lashed into one thick mass of froth and foam of dazzling whiteness; but their surface further down becomes comparatively still, though ever whirling and boiling, and exhibits a totally different appearance from that of any other part of the river. The labouring stream seems inwardly convulsed, heaving and throbbing in dark and bubbling whirlpools, as if it threatened every moment to eject some of the mystic terrors of the deep. This effect is ascribed by Professor Dwight, of the United States, to the reaction of the ascending waters. Precipitated bodily to an extraordinary depth, by their own prodigious gravity and the force of their impulsion, and involving with them a quantity of fixed air, they reascend to the surface in a struggling career, checked by the weight of the superincumbent water.

The noise of the Falls is truly grand, commanding, and majestic; filling the vault of heaven when heard in its fulness, and seeming mystically to impregnate ether with its absorbing sounds. It is very variable in its loudness, being essentially influenced by the state of the atmosphere, the direction of the wind, and the position of the listener. It is sometimes scarcely audible within three or four miles; and at others it may be heard at York, on the opposite shores of Lake Ontario, a distance of six-and-forty miles. The relative situation of York with the mouth of the Niagara river favours the travelling of the sound thus far when the air is remarkably still, or acted upon by south-easterly winds.

It were difficult to convey a very distinct idea of the deep round roar of Niagara; indeed there is a sonorous cadence in the noise of waterfalls,—an alternation of muffled and open sounds,—that can find no perfect similitude. It has been likened to the hoarse voice of oceanic surges heavily lashing the sea-shore; to the plunging dash of huge spherical stones hurled in quick and ceaseless succession from a precipice of great

altitude into profound waters; to the effect produced in a vast mill by the "ceaseless, rumbling, deep, monotonous sound," accompanied with tremor, of numerous sets of millstones moving simultaneously*; but, however these assimilations, and especially the last, which is certainly the best and most familiar, may serve to illustrate description and aid the imagination, yet they are not quite perfect, as the sounds compared are either inadequate resemblances in themselves or deficient in majesty. Perhaps nothing can come nearer the cadence, fulness, and dignity of the sphere-filling thunders of Niagara than the spirited engagement at sea, in still weather, of two heavy squadrons, six or eight miles off†. To a spectator on the heights of Aboukir, the battle of the Nile must have conveyed a correct idea of the roaring, rolling, rumbling, thundering noise of this wonderful cataract.

Not more than 900 yards below the Falls a ferry is established, by which travellers can cross with perfect safety from the foot of the ladder leading beneath the Table-rock, to the American staircase on the opposite bank, keeping along the edge of the tossing and eddying waters, and athwart a swift and heavy current. The resources of art would find little difficulty in throwing a chain bridge over this part of the river (which is hardly 450 yards wide), overhanging the storming chasm, from the summits of perpendicular cliffs, whose altitude is probably not far short of 250 feet. Such a structure would be of much public utility, whilst it would amazingly enhance the romantic interest and splendour of the scenery, and afford a most advantageous full-front view of the stupendous Fall. Suspended as it were in ether, the spectator would stand, between precipitous rock walls, on a level with the crest of the cataract, high over the wild, whirling, foaming, and maddening eddies of the profound abyss, having

* Captain Basil Hall.

† Those who never have been within hearing of a naval action may easily imagine the effect of its pealing artillery, if they have heard fortresses saluted by ships of war, by fancying the discharge of cannon continued without intermission. The evening gun fired from Cape Diamond, particularly in cloudy weather, is grandly re-echoed several times from the mountains around Quebec, producing a full, muffled, vibrating sound, swelling in cadences between the discharge of the cannon, the burst of the echo, and the reverberating echo, not unlike that of Niagara.

in sight Goat Island bridge, apparently borne magically aloft, upon the utmost verge of the falling waters, and being in a manner insulated, he would combine in one vast collective vista all the astonishing beauties, sublimities, and romance of the tremendous and overwhelming scene.

Five miles from the Falls is the whirlpool; a phenomenon scarcely less appalling in its terrors, and probably involving more inevitable destruction to every thing coming within the pale of its attraction. It is occasioned by the stream, as it passes in heavy volumes from the cataract, and sweeps with impetuous violence round an abrupt bend of the river, producing so forcible a reaction as to form a stupendous vortex between the high perpendicular cliffs by which it is walled. By thus diverging from its forward direction, and being as it were embayed for a time, the velocity of the current is checked and subdued to a more tranquil course towards Lake Ontario. Nine miles lower down the Niagara emerges from the deep, rock-bound chasm of the Falls, and thence flows in a deep and gentle tide, between banks of more moderate elevation, to its discharge into the lake. Its mouth is in latitude 43° 15′ 30″, and longitude 79° 00′ 40″, between Fort George or the town of Niagara on the west, and the old French fort Niagara on the east.

That the Falls of Niagara, in ages now long past, and at the period, probably, of the formation of the great lakes, were situated much lower down, between the present villages of Queenston and Lewiston, appears almost indisputably true; and it is believed that all the geologists who have critically examined the locality concur in the assertion of the fact. It is not in the province of the topographer to speculate upon geological phenomena; but we would merely hazard a remark, which superior science may improve if correct, or reject if erroneous. The fact that the Falls have receded being admitted, might not the age of the lakes, at least of Erie and Ontario, as confined to their present basins, be ascertained with tolerable certainty? The waters of Ontario are supposed to have bathed the base of Queenston Heights—nay, the level of the lake is admitted generally to have once been co-equal with the summit of that range: if then, by a series of nice and long-continued observations, the ratio of disintegration in a given time were properly ascertained, the calculation could be carried retrospectively, with all the modifications

that the breadth, depth, &c. of the water-worn chasm would dictate, until it would arrive at the period of the original formation of the cataract, and the gradual depression of the surface of Ontario to its present level. The calculation might, in the same way, be made prospectively, and afford a very curious result as affecting the great physical changes that future ages may work in the bed of the Niagara.

In taking leave of Niagara river, to proceed in our description of the other parts of the St. Lawrence, its lakes and canals, we feel how inadequately we have portrayed the grandeur and manifold sublimities of its unrivalled scenery; but, in truth, there are in nature objects that beggar description, and the cataract of Niagara belongs pre-eminently to that class. There are not wanting, however, faithful portraitures of its magnificence by far abler pens, and we might therefore have excused ourselves from the attempt here; but an account of the Niagara would have appeared to us very deficient, had it not contained such a sketch of the great Falls as accords with the topographical character of the present work.

WELLAND CANAL.

The cascades and cataracts of Niagara river throwing insuperable obstacles in the way of its navigation suggested some years ago the expediency of cutting a ship canal connecting Lake Erie with Lake Ontario *, and an association was accordingly formed and incorporated in 1824, under the name of the WELLAND CANAL COMPANY. In 1825 the capital, which had been previously declared something less, was increased to 180,000*l.* sterling, divided into 16,000 shares of *eleven pounds five shillings* sterling each, all of which have been subscribed, except an amount of *eleven thousand and thirteen pounds six shillings* sterling still (1830) remaining to be taken up.

This momentous work is now nearly completed, and will when finished have cost about *two hundred and seventy thousand pounds* sterling —a comparatively small sum when compared with the magnitude of the undertaking and the incalculable benefits that must inevitably flow from it, both as regards the interests of the stockholders and the commercial

* This bold project is ascribed to Mr. William Hamilton Merritt, a resident at St. Catherine's, a small village through which the canal now passes.

prosperity of Upper Canada*. The total length of the canal is forty-two miles, consisting of three sections; the first extending from the Grand river to the Welland, sixteen miles; the second being part of the river Welland itself, ten miles; and the third lying between Welland river and Lake Ontario, sixteen miles. The entrance of the canal from Lake Erie is situated about two miles above the mouth of the Grand or Ouse river, where the cutting is carried through Wainfleet Marsh to the level of Welland river. The excavation on the north side of the latter river is 56 feet, and the distance to the top of the lockage about five miles. The excavation would have been considerably deeper had the waters of the Welland been used in the northern section of the canal; but the ingenious plan adopted of feeding that section by an aqueduct carried over the river from a higher level to the south has rendered inexpedient any greater depth of cutting. The level of Lake Erie is 330 feet above that of Ontario, and the step is performed by the intervention of thirty-seven locks, thirty-two of which form a successive series, descending from the summit to the base of the range of high grounds constituting the Queenston Heights. The locks are not, however, in immediate contiguity, but sufficiently remote from each other to admit the crossing in the intervening spaces of vessels bound in opposite directions, thus avoiding the tedious delays that would necessarily result from the situation of locks in proximate succession.

The canal is 56 feet wide at the surface of the water, 26 at bottom, and 8½ feet deep. The chambers of the locks are 100 feet in length by 22 in breadth, and therefore amply large enough for vessels of 125 tons' burden, which is above the average tonnage of those employed in trade upon the lakes. The Welland Canal commands two distinct channels into Lake Erie; one through the mouth of the Grand river, the other through the Niagara. This advantage will appear of great moment when it is con-

* It is provided by the charter, that if the tolls exacted be excessive the legislature may, after the expiration of five years from the opening of the canal, reduce them to a rate which will not produce less than twenty per cent. per ann. on the capital expended. After fifty years from the completion of the work, the King may assume the canal on paying the Company the sum it cost, together with a premium of twenty-five per cent. on the amount. But His Majesty cannot do so unless the Company shall have received during the fifty years an average of twelve and a half per cent. on the moneys involved in the concern.

sidered that the distance between those rivers is about thirty-four miles, and that schooners, &c. from Buffalo and other places on the eastern shores of the lake are saved from the whole of so long and circuitous a course by descending the Niagara, and ascending the gentle stream of the Welland to the Ontario section of the canal. This route also being free from toll offers a further inducement to its adoption, which, combined with other concurring conveniences, cannot fail to direct a large proportion of the eastern trade of Erie through that channel. To vessels from the southern and western parts of the lake, the route by the Grand river enjoys likewise its peculiar advantages, by considerably curtailing their distance into Lake Ontario. Besides, it possesses this superiority over the former, that in spring it is much earlier free from the incumbrance of ice, which generally accumulates heavily at the eastern extremity of the lake from the prevalence of westerly winds, and obstructs for a long time the access to the Niagara river and the Grand Erie canal at Buffalo.

The two powerful rivals of the Welland Canal are, the Grand Erie and Ohio canals, the former opening an avenue to the Atlantic by the Hudson river, the latter to the Gulf of Mexico by the Mississippi; but we apprehend that both these grand works will yield the palm to the other in the competition. The superior dimensions of the Welland Canal, that render inexpedient the delays and expense of repeated trans-shipments,—its shortness when compared with its rivals, and the consequent facility and despatch, besides the diminished expense with which it must be passed,—the link that it forms between the schooner navigation of two extensive lakes, and indeed between all the navigable waters above Lake Erie and those of Ontario,—are circumstances which of themselves would be sufficient to secure the patronage of a large proportion of the trade of the lakes, especially if the commercial regulations of both countries be framed upon such principles of liberal policy, as will leave it optional with the inhabitants of either, to adopt that route which their respective interests may dictate.

The ERIE CANAL was certainly a gigantic undertaking, and one of those bold conceptions that at once characterise a great mind; whilst its realization is no less demonstrative of a liberal and enlightened policy,

and an eminent degree of national enterprise. It is the noblest monument that could be left to perpetuate the recollection of the distinguished services rendered by the late De Witt Clinton to the state of New York, of which he was governor. This grand canal was opened under the provisions of two acts of the state legislature, passed, the one in April, 1816 *, the other in April, 1817; on the 4th of July following the operations were commenced, and eight years and a half afterwards completed. The original cost of this great work exceeded one million and a half sterling, and its repairs and ameliorations have since absorbed considerable further sums; but the improvements to which these were applied have essentially added to the solidity, utility, and convenience of the canal.

The Erie Canal, called sometimes the Great Northern, the Western, or the Grand Canal, is three hundred and fifty-three miles long, 40 feet wide at the surface, 28 at bottom, and of a minimum depth of 4 feet water. In the whole distance from Lake Erie to the tide-waters of the Hudson, the difference of elevation is 564 feet, equal to an average proportion of fall not quite amounting to one foot and a half in the mile. This elevation is overcome by 77 stone locks, each 90 feet long by 12 broad, and therefore shorter and narrower by ten feet than those of the Welland. That eventually the locks of Erie Canal will be increased in dimensions is more than probable; but the expense of such an improvement will be very great, owing to the masonic solidity of their construction.

The inferior width and depth of this canal, when compared with the dimensions of the Welland and the Rideau, are perhaps the most important objections against it as a competitor with the latter two, and particularly the Welland, for the trade of the lakes. But this objection is momentous, and must operate strongly, besides the other considerations that have been formerly mentioned, in favour of the preference that will no doubt be given to the Canadian Canal. An important superiority in a commercial point of view, that one canal may possess over another, is the expeditious access which it opens to a shipping-port for foreign

* The commissioners appointed by this act were, Stephen Van Rensselaer, De Witt Clinton, Samuel Young, Joseph Ellicote, and Myron Holley.

markets. On the American side New York is the nearest port where produce, &c. may be shipped in large vessels for export, and the distance by the Erie Canal and the Hudson river is about five hundred and forty miles. On the Canadian side, Montreal is the first port arrived at where this can be effected, and the distance by the St. Lawrence is not more than four hundred miles: through the Rideau Canal and the Ottawa it will be about four hundred and thirty. The Welland Canal, therefore, has the advantage of opening an avenue to a port whence foreign shipments can be made in vessels of heavy burden, upwards of one hundred and forty miles nearer than can be done through the American Canal.

LAKE ONTARIO.

This lake is the last or lowest of those vast inland seas of fresh water that are the wonder and admiration of the world. It is situated between the parallels of 43° 10′ and 44° 11′ of north latitude, and the meridians of 76° 25′ and 79° 56′ of west longitude. It lies nearly east and west, is elliptical in its shape, one hundred and seventy-two miles long, fifty-nine and a quarter extreme breadth, and about four hundred and sixty-seven miles in circumference. The depth of water varies very much, but is seldom less than three or more than fifty fathoms, except in the middle, where attempts have been made with three hundred fathoms without striking soundings. The appearance of the shores exhibits great diversity: towards the north-east part they are low, with many marshy places; to the north and north-west they assume a lofty character, but subside again to a very moderate height on the south. Bordering the lake the country is every where covered with woods, through whose numerous openings frequent settlements are seen that give it a pleasing effect, which is greatly heightened by the white cliffs of Toronto, and the remarkable high land over Presqu'ile, called the Devil's Nose, on the north. The view on the south is well relieved with a back ground produced by the ridge of hills that, after forming the precipice for the cataract, stretches away to the eastward. The finishing object of the prospect in this direction is a conical eminence towering above the chain of heights, called Fifty Mile Hill, as denoting its distance

from the town of Niagara. Of the many rivers flowing into Lake Ontario, if the Genesee and Oswego be excepted, there are none that lay claim to particular notice, unless it be for the peculiarity of their all having a sand-bar across the entrance. There are some fine bays and inlets, where vessels of every description may find protection against bad weather. Burlington Bay is both spacious and secure; but these advantages were rendered of little importance by its narrow entrance being so shallow as to admit only of boats. A canal, however, has been cut across the breach, which has opened an access to the bay for lake vessels, and made it an important and interesting harbour. Hungry Bay is conspicuous as affording good anchorage and safe shelter among the islands to ships of the largest size, at all seasons. York and Kingston harbours, belonging to the English, and Sacket's harbour to the Americans, are unquestionably the best upon the lake, as they possess every natural requisite: the two latter are strongly fortified, being the arsenals where ships of war, even of the first rate, have been constructed by both powers, and from whence have been fitted out those powerful hostile squadrons that have conferred so much consequence upon the naval operations in this quarter. Very heavy squalls of wind frequently occur, but they are unattended either with difficulty or danger if met by the usual precautions every seaman is acquainted with. Of the many islands at the east end of Ontario, the Grand Isle, lying abreast of Kingston, is the most extensive, and, by being placed at the commencement of the Cataraqui river, forms two channels leading into it, that bear the names of the North or Kingston Channel, and the South or Carleton Island Channel.

THE RIDEAU CANAL.

From Lake Ontario to St. Regis, an Indian village about eighty miles above Montreal, the river St. Lawrence is divided longitudinally between Great Britain and the United States, and thus becomes the common highway of both. The hazards and inconvenience of such a communication, arising from its situation along an extended line of national frontier, in the event of future hostility, however remote such a

contingency may be, and we devoutly hope it may never occur, have suggested to both countries the policy of opening avenues in the interior, by which an unrestricted intercourse can be maintained between the distant parts of their respective territories, secure from those interruptions of a neighbouring enemy, incident to a state of warfare. The Grand Erie Canal performs this office on the American side by opening a water communication from the heart of one of the most flourishing states of the union, to the western parts of the United States' dominions; on the British side we have the Rideau Canal, an undertaking of stupendous magnitude and incalculable utility.

The Rideau Canal commences at Kingston, and, traversing the tract of country lying between the St. Lawrence and the Ottawa, strikes the latter river at the foot of the Falls of Chaudière, and a short distance above those of the Rideau, situated at the mouth of that river. It is one hundred and thirty-five miles long, and perfectly unique of its kind in America, and, probably, in the world, being made up in its whole length by a chain of lakes, dams, and aqueducts, so connected by locks of large dimensions as to open a steam-boat navigation from Ontario to the Ottawa river. Rideau Lake, which is about twenty-four miles long, and six broad on an average, is the grand summit level of the canal: it is 283 feet above the waters of the Ottawa on one side, and 154 above the surface of Lake Ontario on the other, requiring in the rise and fall a total number of forty-seven locks, seventeen of which are on the Kingston side, and thirty between Rideau Lake and the Ottawa. These locks were originally planned upon a scale to correspond with those of the La Chine Canal, *i. e.* 100 feet by 20; but these dimensions were subsequently increased to 142 feet in length by 33 in width, the depth of water being 5 feet. There are twenty dams on the whole route, constructed with remarkable solidity and skill, which, by the reflux of the waters they produce, have strangely altered the natural appearances of the country. "In several instances, a dam not more than twenty-four feet high and one hundred and eighty feet wide will throw the rapids and rivers into a still sheet above it for a distance of more than twenty miles. The dams also back the waters up creeks, ravines, and valleys; and, instead of making one canal, they form numerous canals of various ramifications, which will all tend greatly

to the improvement of a very fertile country. The land drowned by the raising of the dams is not worth mentioning, consisting chiefly of swampy wastes, the haunts of otters and beavers *." The principal works on the whole line are situated at the following places:—Entrance Bay, Dow's Great Swamp, Hog's-back, Black Rapids, Long Island, Burnett's Rapids, Nicholson's Rapids, Clowes' Quarry, Merrick's Rapids, Maitland's Rapids, Edmond's Rapids, Phillip's Bay, Old Sly's Rapids, Smith's Falls, First Rapids, the Narrows, the Two Isthmuses, Davis's Rapids, Jones's Falls, Cranberry Marsh and Round Tail, Brewer's Upper and Lower Mills, Jack's and Billydore's Rifts, and Kingston Mills.

This great work, when finished, will have cost Great Britain upwards of half a million sterling; the calculated estimate of the expenses, as given in by engineers, before the plan of enlarging the locks was adopted, amounted to 486,060*l.* If the magnitude of the canal, its immense importance in a military and commercial point of view, and its advantages to an extensive portion of the upper province, be properly considered, this sum will not appear exorbitant, but rather moderate compared with the cost of other canals of much inferior dimensions and utility. There can be little doubt that when the whole line of canal from Kingston to Montreal will be completed, and it is now nearly so, the great thoroughfare of the Canadas will be transferred from the frontier to the Rideau route, until a canal shall have been opened along the St. Lawrence. When sloops and steam-boats of from one hundred to one hundred and twenty-five tons' burden can pass without interruption from the remotest settlements of Upper Canada to Grenville on the Ottawa river, whence their cargoes can be transported with ease and safety through inferior canals to the port of Montreal, we believe that few will hesitate to forward their produce through that channel, even in times of profound peace with our neighbours; especially if the

* M'Taggart, vol. i. This able engineer was actively employed in making the surveys and taking the levels on the whole line of the canal. He had been preceded in these operations by Mr. Clowes and other excellent civil engineers. Mr. M'Taggart has published, in three 12mo. volumes, a work, entitled "Three Years in Canada," containing some shrewd remarks on the country, and especially recommendable when treating of the various branches of his important art.

tolls that will be exacted by government on the Rideau and the Grenville canals be moderate, as in truth it is its interest and policy to make them. When a diversion of trade is to be effected, the inducements to the adoption of the new route should not be neutralized by the exaction of exorbitant tolls and charges; but these should at once be fixed at a reasonable premium, not calculated upon the principle of a large prospective reduction when the canal becomes more frequented.

With such advantages, the Rideau Canal cannot fail in yielding an adequate interest for the moneys expended in its construction, and produce eventually lucrative returns to His Majesty's government.

Considered with relation to the defences of the country, the Rideau Canal must appear of still greater moment, from the means it affords of forwarding to distant stations, with readiness, despatch, and security, the muniments of war necessary to repel invasion, and protect the property and persons of His Majesty's subjects in the colonies from foreign aggression. In a political point of view, its importance is equally conspicuous; since it must obviously tend to strengthen and consolidate the Canadas, by promoting their commercial relations, and that interchange of mutual benefits that constitutes a permanent tie betwixt the various members of a state, and preserves for ages the integrity of empires.

The Grenville Canal consists of three sections:—one at the Long Sault, on the Ottawa, another at the Chûte à Bloudeau, and a third at the Carillon Rapids, opening into the lake of the Two Mountains, through which an uninterrupted navigation is practised by steam-boats to La Chine, nine miles above the city of Montreal. The dimensions of this canal are calculated to correspond with those of the canal of La Chine, which are 28 feet wide at bottom, 48 at the water-line, and 5 deep. It is unfortunate that its proportions should not have been originally planned upon a scale to admit of sloop and steam-boat navigation, and therefore corresponding with the Rideau, by which means no trans-shipments would have become necessary in the transport of produce from the remotest settlements of Upper Canada to La Chine, and the return of goods from thence to the upper countries. The Grenville Canal is nevertheless a work of vast importance under every aspect. It is opened

under military superintendence, and its expenses are defrayed by the imperial government.

The route by the Rideau Canal, the Ottawa, and the Grenville Canal is calculated to avoid, not only the frontier, as we have previously stated, but also the rapids of the St. Lawrence, between Lake Ontario and Montreal. From its discharge, out of Ontario, the St. Lawrence is also known under the names of the *Iroquois* and the *Cataraqui*. It issues from the lake in so broad and beautiful a stream, that it assumes the appearance of a lake for a distance of thirty-nine miles, which is so singularly studded with a multitude of islands, that it has been denominated the Lake of the Thousand Islands, or Mille Isles: but their number far exceeds this mere descriptive computation; the operations of the surveyors employed in establishing the boundary, under the 6th article of the Treaty of Ghent, having ascertained that there were one thousand six hundred and ninety-two, forming an inextricable labyrinth of islands varying in magnitude, shape, and aspect, and presenting the most extraordinary and pleasing vistas and perspectives, in which the rapid and magic combinations of the kaleidoscope seem naturally exhibited.

The distance between Kingston and Montreal is about one hundred and ninety miles. The banks of the river display a scene that cannot fail to excite surprise, when the years which have elapsed since the first settlement of this part of the country (in 1783) are considered. They embrace all the embellishments of a numerous population, fertility, and good cultivation. Well-constructed high roads, leading close to each side, with others branching from them into the interior, render communication both easy and expeditious; while the numerous loaded batteaux and rafts incessantly passing up and down from the beginning of spring until the latter end of autumn, and the steam-boats plying in the navigable interstices of the river, demonstrate unequivocally a very extensive commercial intercourse. The islands, the shoals, the rapids, with contrivances for passing them, form altogether a quick succession of novelties that gives pleasure while it creates astonishment.

The twofold checks existing against the advantages that might be derived from this part of the St. Lawrence, arising from the partition of

its stream between two distinct powers, and the physical embarrassments of its navigation, forcibly point out the necessity of opening a canal along its northern shore. The subject was taken up by the legislature of Upper Canada in 1826, and surveys ordered to be made of the locality, with estimates of the expense that such an undertaking would involve. Two civil engineers, Messrs. Clowes and Ryskesh, were in consequence appointed to the performance of the operations. After establishing the impracticability of rendering the North Channel at Barnhart's Island effectually navigable, they proceeded to the examination of the country along the St. Lawrence between Johnston and Cornwall, a distance of 39 miles, within which are to be found the principal impediments to the navigation of the river. They ascertained that the depression of the river in the stated distance amounted to scarcely 75 feet, an inconsiderable difference of elevation, if we consider an inclined plane of 39 miles, yet sufficient to produce very violent rapids in the St. Lawrence from the heavy volume of its waters.

In order to meet at once any plan that might be adopted either upon an enlarged or more contracted scale, the engineers laid out two canals on the same route, differing materially in their dimensions; one calculated for steam-boats and sloops; the other for canal boats only. The former to be 84 feet wide at the water's surface, 60 at bottom, and 8 deep; the locks 132 feet long and 40 wide, with turning bridges 40 feet in the clear, and 10 feet wide. The estimated cost of such a canal was stated at 176,378*l.* 8*s.* 5*d.* Halifax currency.

The latter canal was laid out upon a scale of much inferior magnitude; its width at the water's surface being 38 feet, at bottom 26, and its depth 4 feet; the locks 100 feet in length by 5 in breadth, with turning bridges 15 feet in the clear, and 10 feet wide. Its cost was estimated at 92,834*l.*

After weighing the advantages of both plans, no hesitation can be made in the preference that must be awarded to the project of a ship-canal, which the first of these offers. A sum of 200,000*l.* expended in connecting between Cornwall and Johnston the sloop and steam-boat navigation of the St. Lawrence would soon, we believe, refund itself. The produce that annually passes down the river, whether directly or

mediately from Upper Canada, is well known to be considerable; and the imports entered at the Custom of Coteau du Lac, in Lower Canada, direct from the United States, are no less momentous in their amount. The following extract from the entries at the port of Montreal in 1827 may convey some idea of the extent of imports from the Upper Province and the United States, *via* the St. Lawrence, into Lower Canada:

	Durham Boats.	Batteaux.	Rafts.
From Upper Canada direct - -	405	134	6
From ditto and the United States -	54	1	0
From the United States direct - -	80	5	8
Total - - -	539	140	14

Most of these Durham boats and Batteaux return laden with British or West India goods; thus we may nearly double the amount of both to have a view of the carrying trade of that section of the river, independently of wood, timber, and staves, that form of themselves an important branch of the colonial trade. The average tonnage of the Durham boats is perhaps 15 tons, that of the Batteaux about 6. Thus we find that the trade of the St. Lawrence above Montreal gives employment to vessels whose collective burden is nearly 10,000 tons. The facilities which a sloop-canal would offer would tend to augment this amount considerably, and hold out equal inducements to the American and the Upper Canadian to transport his produce through that channel. The revenue of the Rideau Canal would probably suffer from the opening of so convenient and more direct an avenue to the lower ports of the St. Lawrence; but it appears to us equally clear that the rapid settlement of the lands on the Ottawa, the natural resources and richness of the beautiful valley through which it flows, will eventually of themselves attract a competent portion of the trade in that direction, and give adequate employment to the Rideau Canal. It is besides obvious that the immediate object designed to be attained by the construction of the Rideau Canal was the security of the colonies; it is their strength, integrity, and preservation that are to be expected from this grand military work, and they certainly have all been amazingly enhanced and promoted by it.

At St. Regis, where the parallel of the 45th degree of north latitude intersects the St. Lawrence, the political, and in some measure the physical characters of the river are at once changed. From this point, westward, we find it divided between the dominion of two foreign states; eastward, it lies exclusively within British territory, and flows through the heart of the flourishing province of Lower Canada, assuming more and more majesty and grandeur as it rolls onward its ample and imposing stream to swell the bosom of the vast Atlantic. The undivided control of this interesting part of the St. Lawrence by His Majesty's government, and the exclusive enjoyment by British subjects of the benefits of its navigation, were not, however, viewed with perfect indifference by our republican neighbours. Always studiously alive to any project that promises to improve the resources and promote the commerce and welfare of any and every department of the union, a claim was started in 1824 by the general government of the United States, to a participation in those benefits, and a right to the free navigation of the St. Lawrence in its whole course to the ocean.

This extraordinary claim first originated after the passing of the Canada Trade Act by the imperial parliament in 1822, by which heavy duties were levied upon articles from the United States, chiefly timber, pot and pearl ashes, flour, and salt provisions, which had anteriorly entered into successful competition with those of a similar description from Upper Canada, and for the protection of which, amongst other things, the British statute referred to was passed. This enactment, without investigating its policy, proved necessarily obnoxious to the inhabitants of the northern frontier of the state of New York; and a memorial was in consequence transmitted by them to Congress in 1823, complaining of this momentous interruption to the current of their trade as a grievance calling loudly for legislative redress. This memorial suggested the expediency of retaliatory enactments, imposing countervailing duties on Canadian produce and British goods passing up or down such sections of the navigable channels of the St. Lawrence above St. Regis as were wholly included within the American boundary. To effect this it was stated that the mere repeal of the act of Congress passed in 1799, confirming the reciprocal rights of both powers to the free use of the waters

of that river, as created by Jay's treaty in 1794*, would be sufficient, since the confirmatory act of Great Britain stood virtually repealed by the Canada Trade Act, and that the treaty of 1794 had become a dead letter in consequence of the state of hostilities that subsequently accrued between the two countries †.

No such measures of impost retaliation were nevertheless adopted; nor could they, supposing their practicability, have been commensurate in their efficacy with the ends proposed. It will be recollected that if the navigable channel at Barnhart's Island fall exclusively within the American line, there are other parts of the river in which the main channel lies wholly, or in a great measure, within the British frontier—a circumstance which would of itself render inconvenient, at least, to all parties, the enforcement of any commercial regulations affecting the free use, by the people of both countries, of the waters of the St. Lawrence above St. Regis. It is true that, having no markets to which they might freely resort below St. Regis, the American trade upon the river would be very limited; but would not the Canadian trade be equally if not more so, since the St. Lawrence could on all occasions be forsaken for the Rideau? It is when questions of this nature are agitated in relation to a frontier navigation, that the whole importance of such a stupendous work as the Rideau Canal is felt in its full force, since it places our in-

* The article of this treaty relating to the subject is not, we believe, very generally known: the *exception* it contains is ambiguously worded, but it seems to be made dependent upon *future regulations to be established.*—" Art. III. It is agreed that it shall at all times be free to His Majesty's subjects, and to the citizens of the *United States*, and also to the *Indians* dwelling on either side of the said boundary line, freely to pass and repass by land or inland navigation into the respective territories and countries of the two parties on the continent of *America* (the country within the limits of the *Hudson's Bay* Company only excepted), and to navigate all the lakes, rivers, and waters thereof, and freely to carry on trade and commerce with each other. But it is understood that this article does not extend to the admission of vessels of the *United States* into the sea-ports, harbours, bays, or creeks of His Majesty's said territories; nor into such parts of the rivers in His Majesty's said territories as are between the mouth thereof and the highest port of entry from the sea, *except in small vessels trading* bonâ fide *between Montreal and Quebec*, under such regulations as shall be established to prevent the possibility of any frauds in this respect; nor to the admission of *British* vessels from the sea into the rivers of the *United States* beyond the highest ports of entry for vessels from the sea."

† Mr. Vaudenheuvel's speech on this subject in the Assembly of the State of New York in 1825.

internal commerce beyond the reach of foreign interruption, and secures the independency and safety of our colonial intercourse.

Unsupported by any treaty, the right of the United States to the free navigation of the St. Lawrence is made to rest upon the broad principles of the laws of nature, which, say the assertors of the right, point out that splendid stream as the natural highway—the ostensible exit for produce of the fertile and wide-spreading territory which it drains in its progress from its source to the sea. But this argument, as regards international policy, is more plausible than sound, and the claim of *right* has been unhesitatingly denied, and steadfastly resisted by Great Britain, in all the negotiations that were attempted on the subject, between the United States' plenipotentiaries and His Britannic Majesty's ministers. However, the discussion of a treaty that should have for its principle the mutual convenience and commercial interests of both parties was never, we believe, declined by the British foreign minister; but, too jealous of every apparent concession, the American government abstained from negotiating upon grounds that amounted to a dereliction of an assumed right, as novel as it is extraordinary. The question is one of deep interest and considerable moment to both powers; and we believe that under certain restrictions, such as exporting American produce in British bottoms, the St. Lawrence might advantageously to all parties be thrown open to the passage of American lumber, staves, flour, pot and pearl ashes, and salted provisions, under the most moderate protecting duties. Such a policy would not only remove in a great measure the grievance complained of by the inhabitants of the New York frontier, but create an additional stimulus in the markets of Montreal and Quebec, give increased occupation to British shipping, and afford still more amply and effectually the means of supplying the West India markets with produce.

Before reaching Montreal, the Lakes St. Francis and St. Louis present themselves. They do not admit of comparison with those already noticed, and can, indeed, only be considered as so many expansions of the river. They are of no great depth, but form an agreeable variety, much heightened by the many pretty islands scattered about them. St. Francis is twenty-five miles long by five and a half broad.

The shores in some places are marshy, as they do not rise much above the level of the water. St. Louis is formed at the junction of the Ottawa with the St. Lawrence; it is twelve miles long by six broad. Between both these lakes a sudden declivity in the bed of the river, obstructed by rocks in some places, and scooped into cavities at others, produces the most singular commotion, called the Cascades; it is an extraordinary agitation of the waters precipitated with great velocity between the islands, which being repelled by the rocks and hollows underneath, the waves are thrown up in spherical figures much above the surface, and driven with the utmost violence back again upon the current, exhibiting nearly the same effect as would be produced by the most furious tempest. To avoid the danger of passing this place, a canal, usually called the military canal, has been constructed across the point of land, and through which all boats now make their way to the locks at Le Buisson; it is 500 yards in length, and furnished with the necessary locks. The Lake of the Two Mountains, an expansion of the Ottawa, is at the mouth of that river, and merges in a manner into Lake St. Louis: it is very irregular, and in its whole length is twenty-four miles, varying in breadth from one mile to six miles. At the confluence of the two rivers are the Islands of Montreal, Isle Jesus, Bizarre, and Perrot: the first is probably the most beautiful spot of all Lower Canada, and is described with particular attention, under its proper head, in the Topographical Dictionary of that province.

Below Lake St. Louis is the beautiful rapid called the *Sault St. Louis*, between the picturesque Indian village of Caughnawaga, on the south, and La Chine on the north. The cascade is violent, very dangerous, and almost insuperable; and the design of the Canal of La Chine is to avoid its difficulties and perils. This canal is rather more than eight miles long, extending from the village of Upper La Chine to the city of Montreal, and equal in its dimensions to that of Grenville, of which it was the prototype. It was opened under legislative aid, and cost nearly 130,000*l.*; an enormous sum, when we consider its length, its capacity, and the fewness of the locks it required; but, on the other hand, the work is finished in the first-rate style of art, and cannot be excelled in the excellence of its materials or the elegance of its work-

manship*. The La Chine Canal† is the last on the St. Lawrence; the navigation below Montreal being altogether free from those obstructions that need the resources of art to overcome.

On the south side of the island, is the city of Montreal, and its convenient port, five hundred and eighty miles from the Gulf of St. Lawrence, to which ships of six hundred tons can ascend with very little difficulty. On the north-west lies Isle Jesus, that, by its position, forms two other channels of a moderate breadth—one called La Rivière des Prairies, and the other La Rivière de St. Jean ou Jésus: they are both navigable for boats and rafts, and unite again with the main river at Bout de l'Isle, or the east end of Montreal Island. From this city the navigation assumes a character of more consequence than what it does above, being carried on in ships and decked vessels of all classes. Hence to Quebec, a distance of one hundred and eighty miles, the impediments to vessels of large tonnage sailing either up or down are not many, and may be overcome with much ease, if it be judged expedient that their cargoes should be so conveyed in preference to transporting them in small craft and steam-boats. However, the use of tow-boats, propelled by engines of great power, has combined both means of transport; and it is not now unusual to meet on the St. Lawrence a splendid steamer with two large vessels moored to her flanks, and a third ship in tow, carrying together upward of 1000 tons burden, plying the waters at the rate of seven or eight miles an hour, and sometimes more.

On either side the prospect is indeed worthy of admiration The different seigniories, all in the highest state of improvement, denote both affluence and industry; the views are always pleasing and often beautiful, although the component parts of them do not possess that degree of grandeur which is perceivable below Quebec; numerous villages, for the most part built round a handsome stone church, seem to invite the traveller's attention; while single houses and farms at agreeable distances

* The engineer, Mr. Burnett, had not the satisfaction of seeing the canal completed: a disorder brought on by an overwrought zeal and anxiety prematurely put an end to his life, during the progress of the work.

† For a more particular account, see *Topographical Dictionary of Lower Canada*, under "*La Chine Canal.*"

appear to keep up a regular chain of communication. In fact, whoever passes from one city to the other, whether by land, or by the broad and majestic stream of the St. Lawrence, will not fail to be highly gratified and delighted, and to meet with many subjects worthy both of observation and reflection.

About forty-five miles below Montreal, on the south side, is the town of William Henry, or Sorel, built at the confluence of the river Richelieu with the St. Lawrence, not far from which the latter spreads into another lake, the last in its progress towards the sea: it is called St. Peter's, is twenty-five miles long and nine broad. Like most of the others, this has a group of islands covering about nine miles of its western surface. Between them two distinct channels are formed. The one to the south being the deepest and clearest is consequently the best for ships. The banks on each side are very low, with shoals stretching from them to a considerable distance, so that only a narrow passage, whose general depth is from twelve to eighteen feet, is left unobstructed. About forty-five miles from William Henry, on the north side, at the mouth of the river St. Maurice, stands the town of Three Rivers, the third in rank within the province. At this place the tide ceases entirely, and, indeed, is not much felt at several miles below it.

Leaving Three Rivers, there is scarce any variation in the general aspect of the St. Lawrence until arriving at the Richelieu rapid (about fifty-two miles), where its bed is so much contracted or obstructed by huge masses of rock, as to leave but a very narrow channel, wherein at ebb tide there is so great a descent, that much caution and a proper time of the ebb is necessary to pass through it; at the end of the rapid is a good anchorage, where vessels can wait their convenient opportunity. From Montreal, thus far, the banks are of a very moderate elevation, and uniformly level, but hereabout they are much higher, and gradually increase in their approach to Quebec, until they attain the altitude of Cape Diamond, upon which the city is built. At this capital of the province and seat of government there is a most excellent port and a capacious basin, in which the greatest depth of water is twenty-eight fathoms, with a tide rising from seventeen to eighteen, and at the springs from twenty-three to twenty-four feet.

From Cape Diamond, and from Point Levi on the south shore, one of the most striking panoramic views perhaps in the whole world offers itself to notice; the assemblage of objects is so grand, and though naturally, yet appear so artificially contrasted with each other, that they mingle surprise with the gratification of every beholder. The capital rising amphitheatrically to the summit of the cape, the river St. Charles flowing, in a serpentine course, for a great distance, through a fine valley, abounding in natural beauties, the falls of Montmorency, the island of Orleans, and the well cultivated settlements on all sides, form together a coup d'œil that might enter into competition with the most romantic. At Quebec the St. Lawrence is 1314 yards wide, but the basin is two miles across, and three miles and three-quarters long: from the basin, the river continues increasing in breadth until it enters the gulf of the same name, where, from Cape Rosier to the Mingan settlement on the Labrador shore, it is very near one hundred and five miles wide.

A little below the city is the Isle of Orleans, placed in the midway, consequently forming two channels; the one to the south is always used by ships; the shore on that side is high, and on the opposite, in some places, it is even mountainous, but in both extremely well settled, and the lands in such a high state of improvement, that a large tract in the vicinity of Rivière du Sud has long been familiarly called the granary of the province. The waters of the St. Lawrence begin to be brackish about twenty-one miles below Quebec, increasing in their saline acrity, until they become perfectly sea-salt at Kamouraska, 75 miles lower down. Beyond the island of Orleans are several others, as Goose Island, Crane Island, and many smaller ones; these two are tolerably well cultivated, and are remarkable for the extent and excellence of their natural pastures, but the rest are neglected. At Rivière du Sud the stream of the St. Lawrence is increased to eleven miles in width, and the country that adjoins it cannot be easily rivaled in its general appearance; the gay succession of churches, telegraph stations, and villages, whose houses are almost always whitened, so as frequently to produce a dazzling effect, are so well exhibited by the dark contrast of the thick woods covering the rising grounds behind them up to their very summits, that few land-

scapes will be found actually superior in point of interesting variety and beauty.

Beyond Rivière du Sud is a channel named the Traverse, which deserves mention from its importance as the main ship-channel, and the circumstance of its being remarkably narrow, although the river is here thirteen miles across; the Isle aux Coudres, the shoal of St. Roch, and another called the English Bank, contract the fair way to not more than 1320 yards* between the two buoys that mark the edge of the shoals; it is the most intricate part of the river below Quebec; the currents are numerous, irregular, and very strong, on which account large ships must consult the proper time of the tide to pass it without accident. Amongst the various improvements to the navigation of the St. Lawrence, in agitation, it is contemplated to substitute, to one of the buoys, a floating light, which will enable vessels to pass the Traverse at night; and we hope that so important an object will be promptly carried into effect. On the north shore, between the Isle aux Coudres and the main, there is another channel, in which the current was considered so rapid, the depth of water so great, and the holding ground so bad, that it was for many years forsaken, until the erroneous prejudices existing against it were removed by the spirited parliamentary exertions of Dr. M. Paschal de Sales Laterriere, whose opinion, relative to the advantages and security of the north channel, stands strongly corroborated by the hydrographical surveys of Captain Bayfield, R. N. Future pilots are, therefore, required, by the regulations of the Trinity House of Quebec, to become equally acquainted and familiar with both channels; a measure of the greatest necessity and importance, since it is well known that their ignorance of the northern channels of the river has, on several occasions, threatened shipwreck to vessels, driven by heavy winds out of the south channel.

A third channel, formerly known by French mariners, when Canada was under the dominion of France, and then called the "Chenal d'Iberville," was re-discovered and surveyed lately by Captain Bayfield. It runs up the middle of the river, and although more contracted and intricate than the others, is yet sufficiently deep for ships of any burden. It is now

* Captain Bayfield, R. N.

generally known by the name of Bayfield's Channel, after its recent discoverer; and a knowledge of it is, we believe, equally with others enjoined to the St. Lawrence pilots.

Passing the Traverse, a very agreeable view of the settlements of the bay of St. Paul, enclosed within an amphitheatre of very high hills, and the well cultivated Isle aux Coudres at its entrance, presents itself. Continuing down the river, the next in succession are the islands of Kamourasca, the Pilgrims, Hare Island, and the cluster of small ones near it, named the Brandy Pots; these are reckoned one hundred and three miles from Quebec, and well known as the general rendezvous where the merchant ships collect to sail with convoy. At no great distance below is Green Island, on which is a light-house, where a light is shown from sun-set until sun-rise, between the 15th April and the 10th December. Near Green Island is Red Island, upon which it is believed the light-house would have been preferably situated, and abreast of it, on the northern shore, is the mouth of the river Saguenay, remarkable even in America for the immense volume of water it pours into the St. Lawrence.

Proceeding onward is Bic Island, one hundred and fifty-three miles from Quebec, a point that ships always endeavour to make on account of its good anchorage, and as being the place where ships of war usually wait the coming down of the merchantmen; next to Bic is the Isle St. Barnabé, and a little further on the Pointe aux Pères. From this point the river is perfectly clear to the gulf, and the pilots, being unnecessary any longer, here give up their charge of such as are bound outward, and receive those destined upward. Below Pointe aux Pères are two very extraordinary mountains close to each other, called the Paps of Matane, and nearly opposite them is the bold and lofty promontory of Mont Pelée, where the river is little more than twenty-five miles wide, but the coast suddenly stretches almost northerly, so much, that at the Seven Islands it is increased to seventy-three miles. A light-house on Mount Pelée had long been a desideratum, as an important point of departure, whence vessels may shape their course with safety, whether in ascending the river, or in leaving it to traverse the gulf. Provision was, therefore, made by the legislature of Lower Canada for its erection, and its com-

pletion has been recently announced by the Trinity House, with directions to mariners.

The settlements on the south side reach down thus far, but hereabout they may be considered to terminate, as, to the eastward of Cape Chat, the progress of industry is no longer visible; on the north side the cultivated lands extend only to Malbay. In the river itself nothing claims our attention except the separation of its shores to the distance already mentioned, from Cape Rosier to the Mingan settlement *. In the mouth of the St. Lawrence is the island of Anticosti, one hundred and twenty-five miles long, and in its widest part thirty, dividing it into two channels. Its geographical position has been ascertained with exactness, and is thus laid down: the east point latitude 49° 8′ 30″, longitude 61° 44′ 59″, variation 24° 38′ west: the west point latitude 49° 52′ 29″, longitude 64° 36′ 54″ †, variation 22° 55′; and the south-west point latitude 49° 23′, longitude 63° 44′. Through its whole extent it has neither bay nor harbour sufficiently safe to afford shelter to ships; it is uncultivated, being generally of an unpropitious soil, upon which any attempted improvements have met with very unpromising results; yet, rude and inhospitable as its aspect may be, it is not absolutely unprovided with the means of succouring the distress of such as suffer shipwreck on its coasts, there being two persons who reside upon it, at two different stations, all the year, as government agents, furnished with provisions for the use of those who have the misfortune to need them. Boards are placed in different parts, describing the distance and direction to these friendly spots; but instances of flagrant inattention in the persons employed have, however, occurred, which were attended with the most distressing and fatal consequences to the unfortunate sufferers of ship-

* In describing the course of the river, and wherever distances are given in miles, they always imply the statute mile of 69½ to a degree, unless otherwise specified.

† Observations of J. Jones, Esq. master on board H. M. S. Hussar. By the previous observations of the late Major Holland, surveyor-general of Canada, these points were placed thus: east point, latitude 49° 5′, longitude 62° 0′; west point, latitude 49° 48′, longitude 64° 35′. The south-west point is placed in the latitude and longitude given to it by the observations of the latter, whose astronomical positions, as taken in the course of his extensive and interesting surveys on the continent and along the vast coast of America, are in general remarkably correct, and do him great honour as a nice observer and scientific astronomer.

wreck; the succours intended for their relief not having been provided, and the habitations being found deserted *. These establishments were made in the year 1809, the humane intention of which will be honoured wherever it is made known, because the crews of vessels driven on shore here have, sometimes, at the utmost peril of their lives, forsaken them to make their escape to Gaspe. In addition to these precautions, the erection of two lighthouses is in contemplation; one of which will be situated at the east point of the island; the other at the west, though some mariners believe that the second would be most useful on the south-west point. The importance of this measure needs no comment.

With the powerful conviction upon our mind of the great estimation the river St. Lawrence ought to be held in, from presenting itself as the outlet designed as it were by nature to be the most convenient one for exporting the produce of these two extensive and improving provinces, the country stretching to the north-west nearly to the Pacific ocean, and even the adjacent parts of the United States, which, in defiance of prohibitory decrees, will find an exit by this channel, we have, it is feared, incurred the charge of prolixity in wishing to convey to others a clear conception of its importance; yet we must still trespass upon the patience of our readers long enough to mention that the observations hitherto made apply only to one part of the year; and also to notice that, from the beginning of December until the middle of April, the water communication is totally suspended by the frost. During this period, the river from Quebec to Kingston, and between the great lakes, except the Niagara and the Rapids, is wholly frozen over. The lakes themselves are never entirely covered with ice, but it usually shuts up all the bays and inlets, and extends many miles towards their centres: below

* Among the numerous wrecks that have taken place on the dangerous coasts of Anticosti, that of the *Granicus*, in 1828, is the most awful and affecting on record. Numbers of the crew and passengers, who escaped from the waves, became the wretched victims to the worst horrors of cannibalism, having found the habitations to which they directed their steps, totally deserted, and unprovided with the means of relieving any of their wants. The cadaverous horrors of the scene this spot exhibited, after the last spark of human life had ceased to animate the hideously mangled corses, are almost too shuddering for description, and mingle our tenderest sympathies with feelings of the most painful disgust.

Quebec it is not frozen over, but the force of the tides incessantly detaches the ice from the shores, and such immense masses are kept in continual agitation by the flux and reflux, that navigation is totally impracticable in these months.

But though the land and water are so nearly identified, during so long a winter, the utility of the river, if it be diminished, is far from being wholly destroyed, for its surface still offers the best route for land carriage (if the metaphor can be excused); and tracks are soon marked out by which a more expeditious intercourse is maintained by vehicles of transport of all descriptions, than it would be possible to do on the established roads, at this season so deeply covered with snow, and which are available until the approach of spring makes the ice porous, and warm springs, occasioning large flaws, render it unsafe. When this alteration takes place it soon breaks up, and, by the beginning of May, is either dissolved or carried off by the current.

The Gulf of St. Lawrence, that receives the waters of this gigantic river, is formed between the western part of Newfoundland, the eastern shores of Labrador, the eastern extremity of the province of New Brunswick, part of the province of Nova Scotia, and the island of Cape Breton. It communicates with the Atlantic ocean by three different passages, viz. on the north by the straits of Belleisle between Labrador and Newfoundland; on the south-east by the passage between Cape Ray, at the south-west extremity of the latter island, and the north cape of Breton Island; and, lastly, by the narrow channel, named the Gut of Canso, that divides Cape Breton from Nova Scotia.

The distance from Cape Rosier, in latitude 48° 50′ 41″, longitude 64° 15′ 24″, to Cape Ray, in latitude 47° 36′ 49″, longitude 59° 21′ 0″ *, is 79 leagues; and from Nova Scotia to Labrador 106. On its south side is the island of St. John, otherwise called Prince Edward's Island, something in shape of a crescent, about 123 miles long, in its widest part 32, and in its narrowest, at the extremities of two deep bays, less than four. To the northward of St. John's are the Magdalen Islands, seven in

* Rear-Admiral Sir Charles Ogle.

number, thinly inhabited by a few hundred persons, chiefly employed in the fisheries *. North, again, of the Magdalens is Brion's Island, and beyond this are the Bird Islands; the northernmost of which is situated in 47° 50′ 28″ north latitude, and 61° 12′ 53″ west longitude †. The Birds are points of importance in the navigation of the gulf, and the most northern of the two islands has been judiciously pointed out as a very fit and advantageous position for a lighthouse. This island is a mere rock, conical in shape, abrupt, and dangerous, and rising to no inconsiderable altitude; it is frequented by innumerable coveys of birds, and appears in the distance perfectly white, from the long accumulation of ordure deposited by them upon it.

In the principal entrance to the gulf, between Cape North and Cape Ray, is the island of St. Paul, in latitude 47° 12′ 38″, longitude 60° 11′ 24″, the variation of the compass being 23° 45′ west. The position of this island and the boldness of its shores render it the most dangerous enemy to the safety of vessels going in or out of the gulf, and the more so from the frequency of heavy fogs upon that coast. The numerous instances recorded of total shipwreck upon this inhospitable island are lamentable evidence of the perils it threatens, and it is a matter of surprise that the repetition of accidents so disastrous should not have long since been prevented by those expedients adopted upon all dangerous coasts. The exertions, however, of the harbour-master of Quebec ‡ upon this subject have not been unattended with success; and the erection of a lighthouse upon the highest summit of the island will soon, we believe, be commenced. It is also proposed, that in foggy weather a gong should be sounded, or guns fired, to warn ships of their approach. With such precautionary measures, added to the beacons placed in various other parts of the Gulf and the River St. Lawrence, ships may at all times proceed with safety on their voyage, whether inward or outward, the

* For a particular description of these islands, and of all those above them included in the province of Lower Canada, see the *Topographical Dictionary*, under their respective heads.

† Rear-Admiral Sir Charles Ogle. In the Appendix (No. 3) will be found an important table of latitudes and longitudes of headlands and islands on the coasts of North America, and in the Gulf and River St. Lawrence, deduced from the scientific observations of Mr. Jones, of H. M. S. Hussar, as taken under the command of Admiral Ogle.

‡ Mr. Lamby.

shipping interest and trade of the country will be essentially benefited, and the lives and property of thousands saved from destruction.

Islands of ice are sometimes met with in crossing the gulf during the summer months: the ice that drifts out of the St. Lawrence all disappears by the latter end of May, but these masses make no part of it. The conjecture is that they are not formed on any of the neighbouring coasts, but descend from the more northerly regions of Hudson's Bay and Davis's Straits, where it is presumed they are severed by the violence of storms from the vast accumulations of arctic winter, and passing near the coast of Labrador, are drawn by the indraught of the current into the straits of Belleisle. They often exceed an hundred feet in height, with a circumference of many thousands; the temperature of the atmosphere is very sensibly affected by them, which, even in foggy weather, when they are not visible, sufficiently indicates their neighbourhood. By day, from the dazzling reflection of the sun's rays, their appearance is brilliant and agreeable, and it is no less so by moonlight.

LOWER CANADA

MONUMENT to WOLFE and MONTCALM.

QUEBEC.

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CHAPTER VIII.

LOWER CANADA—Situation—Boundaries—Extent—Divisions and Subdivisions.

THE province of Lower Canada lies between the parallels of the 45th and 52d degrees north latitude, and the meridians of 57° 50′ and 80° 6′ west longitude from Greenwich. It is bounded on the north by the territory of the Hudson's Bay Company, or East Maine; on the east by the Gulf of St. Lawrence and a line drawn from Ance au Sablon, on the Labrador coast, due north to the 52° of latitude*; on the south by New Brunswick and part of the territories of the United States, viz. the states of Maine, Hampshire, Vermont, and New York†; and on the west by a line which separates it from Upper Canada, as fixed by His Majesty's order in council of August, 1791, and promulgated in the province on the 18th November of the same year, with the following description: viz. "To commence at a stone boundary on the north bank of the Lake St. Francis, at the cove west of Pointe au Baudet, in the limit between the township of Lancaster and the seigniory of New Longueuil, running along the said limit in the direction of north, 34° west, to the western-most angle of the said seigniory of New Longueuil; then along the north-western boundary of the seigniory of Vaudreuil, running north, 25° east, until it strikes the Ottawa river; to ascend the said river into the lake Temiscaming, and from the head of the said lake by a line drawn due north, until it strikes the boundary line of Hudson's Bay, including all the territory to the westward and southward of the said line to the utmost extent of the country commonly called or known by the name of Canada."

The western boundary, as just recited, evidently appears to have been founded upon an erroneous map of that part of the country, whereon

* The eastern boundary did not extend beyond the River St. John until the passing of the British statute, 6 George IV., chap. 59, by which the limits were extended eastward along the Labrador coast to Ance au Sablon. The island of Anticosti was also re-annexed by it to Lower Canada.

† The boundaries of the British possessions in America are particularly treated of in Chapter I.