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NIAGARA

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A BRIEF STUDY FROM MANY STANDPOINTS

BY

FRANK H. SEVERANCE

CONTENTS.

	PAGE.
INTRODUCTORY,	3
A PAGE OF THE PAST,	6
THE RIDDLE OF THE ROCKS,	11
THE CHAIN OF RECENT CHANGE,	13
NIAGARA IN LETTERS AND IN ART,	17
HOW THE FALLS WERE MADE FREE,	22
HOW TO SEE NIAGARA,	26
A STUDY OF THE ROAR,	38
NIAGARA AND THE TOURIST,	41
COMEDY AND TRAGEDY,	44
PAUL PHILIPPOTEAU'X,	47

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: NIAGARA FALLS:

Nature's Grandest Wonder

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Greatest

City

M. N. C.
BUREAU.

IT IS RELATED of that unconventional Englishman, Lord Byron, that on meeting an American gentleman, just arrived in London, he asked abruptly if the traveler had ever seen Niagara Falls. The American contritely admitted that he never had, whereupon the poet turned from him with an expression of disgust at one who should come so far in quest of sights, leaving behind *such* a sight unseen.

The American, however, was the type of his countrymen, rather than the exception. An American of wealth and leisure is far more apt to travel for pleasure in Europe than in his own country; partly because, if he is a man of taste, he gets more for his money abroad than at home, where civilization has none too much to offer in works of art or relics of past centuries; and partly because, if he has been a man of affairs, he has incidentally gained a general idea of much of the fine scenery of his own land without making a special effort for it. Business has probably called him back and forth between New-York and Chicago, Philadelphia and Washington. In the United States the great highways of traffic are through regions of surpassing beauty and picturesqueness. It is in this fashion that a majority of

traveling Americans have seen Niagara Falls. Unquestionably the sublimest passage in American scenery east of the Rocky Mountains, they have been made an objective point by several great railways, which have thrown their steel arms around them, taken possession of every vantage ground and point of view where they could gain a foothold, and made it quite possible for the hurrying traveler to "see Niagara" from the window of his railway coach.

With the European visiting America the case is different. There are no ruined castles or ivied cathedrals to teach him history or satisfy his romantic cravings; little if anything in art or architecture on which he cannot improve at home. He comes to America, usually, as a sight-seer, knowing that the principal things seen will be the people and the natural scenery. He hastens to Niagara Falls, and rests there long enough to study and enjoy thoroughly the incomparable features of the region.

One of the sayings with which Americans have been wont to amuse themselves is to the effect that every Englishman who visits the country goes back after a brief stay and writes a book about what he has not seen. Concerning Niagara Falls the allegation fails; for, though no spot in the land has been more written about, no one has written about it better than some of the distinguished Englishmen who have visited it during the past half century. It is a singular fact that thoroughly good descriptions of Niagara Falls are exceedingly rare. The extraordinary natural features which are presented seem to tempt pens usually decorous and skillful into extravagant and inartistic flights. Exaggeration, hasty judgment, and imperfect information predominate in much that has been written of a region than which none better merits the exalted tribute of truth. It is as if the perverse spirit of that first and gloriously untrustworthy recorder of Niagara's grandeur—good old *Père* Louis Hennepin—had survived through two centuries to lend magnifying powers to the quill of whosoever essays to follow him as a chronicler.

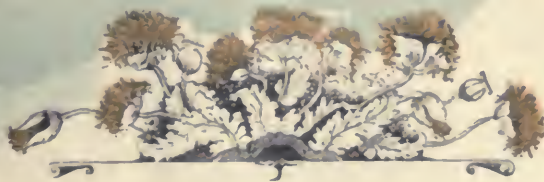
Strange is it, too, that of a region which has been so much written about there is now so little which may be dignified with the name of literature. Descriptions there are, in countless numbers, but many of them are of a rank with the vapid "impressions" which tourists are fond of scribbling in albums and commonplace books. True, the history of the region has been faithfully and skillfully recorded;

but the Niagara frontier yet waits the coming of one who shall throw over its hard historical outlines the magic veil of fancy. The whole valley of the Niagara sleeps under an atmosphere of romance, invisible yet until the true romancer comes with charmed pen to render a service akin to that which gentle Irving did for the valley of the Hudson.

To an American whose pen is inspired by patriotism, it is a tempting theme. Our earliest knowledge of Niagara shows us a turbulent highway through an unbroken wilderness. How new it all must seem to one accustomed to the Old World standard of antiquity! A scant 200 years have passed since the explorer and the priest passed westward together by this difficult pathway; the one inspired by quest of gain, the other holding aloft the cross. As is ever the case in the anomaly of civilization, unrest and bloodshed followed the sacred symbol of peace. The wilderness is never conquered without a struggle; and when the Niagara had been rescued from the forest and the Indian, it was with an endowment of tragic strife which still may well tempt the romancer or the historian. In the unceasing voicings of the great stream may still be heard the defiant whoops, the dying groans, the whispers and the heartbeats of a vanished race.

In later years, too, when the struggle for possession was not between Indian and white man, but between one white man and another, between French and English, each wary of treachery in their Indian allies, the short 36 miles of the Niagara which join lakes Erie and Ontario were the theater of a continuous struggle. It became an important point of the international frontier, until finally, in 1812, in the words of a local historian, "The contest ended triumphantly for both parties; for England, in that she yielded nothing we asked of her; and for the United States, in that they won so many glorious victories by land and sea." *

* Holley's History of Niagara, p. 41.



A PAGE OF THE PAST.



FEW MILES above the cataracts of the Niagara; on the American bank of the stream, buried in orchards, with a rural life that flows as placidly as the broad river at its door, a little village rejoices in the name of the great explorer to whom history owes its earliest knowledge of Niagara. La Salle came in 1678, and near the village which bears his name built the first craft in which white men ever sailed upon the Great Lakes. With him came the Franciscan missionary, *Père* Louis Hennepin, the chronicler of the expedition.

For almost a hundred years after La Salle the history of the Niagara belongs to France. The French preceded the English in planting colonies in America, and for many years held the strategic points on the advancing western frontier. The posts at the mouth of the Niagara, and above the Falls, valued at first as useful stations in the fur trade, later became points of contest with the English. England, pushing westward of the Alleghenies, captured the French fort at Niagara in the campaign of 1759. General Prideaux, the first English commander who struggled for possession of the Niagara country, was killed in the engagement which ended victoriously for the English. Sir William Johnson, on whom the English command devolved, strengthened the garrison, enlarged the fort, and boldly opposed rather than conciliated the unfriendly Iroquois. The English, just as the French had before them, wanted to control the Niagara frontier for the sake of the fur trade with the Indians.

For five years, from 1759, Sir William Johnson held the fort at Niagara, and made such headway against the Indians as was possible; seeking, as a principal end of occupancy, the building up of a profitable traffic. But in the spring of 1764 he undertook more; the English must have absolute title as well as possession of Niagara Falls. So a great council was held with the Indians, who camped, 2,000



VIEW OF NIAGARA FALLS AS SEEN FROM PROSPECT PARK, AMERICAN SIDE.

Engraved by Thomas & C. McTearny

strong, around the fort. The result of the council, which lasted several days, is learned from a dispatch sent by Sir William to the Earl of Halifax, August 30, 1764: "Your Lordship will observe, by the treaty of peace with the Senecas, that they have given up all the lands from Lake Ontario to Lake Erie, of the breadth of four miles on each side of the strait. * * * * At the time of making this cession, the Senecas gave me all the islands lying in the strait between the two lakes."

So the English were in possession of the Niagara, and gained some profit out of it, as the years went by. But during these years a young nation was growing up in the same land. While the English were shrewdly taking from the Senecas their possessions, this young nation was making up its mind that there should be, in history, the United States, a nation, not merely America, a British province. Twelve years after Sir William Johnson had presented the English Crown with Niagara Falls as an incomparable jewel, some patriotic Americans signed a Declaration of Independence, which has since been much heard of. Having declared that they *would* be independent, they fought seven years to prove it; and nobody has ventured to doubt the proof, to this day.

The Niagara frontier was remote from the scenes of the American revolution. During the war, England held on to what she had gained from the Senecas. In 1779 her post by the great cataract was threatened. Gen. Sullivan, marching northward through what is now Western New-York, had his eye on the British at Fort Niagara; but disaster attended his raid, and the Niagara was not reached. Four years later the Treaty of Paris was signed, and England pledged her word to keep out of the United States. Although by this treaty of 1783 Great Britain recognized the Great Lakes as our northern boundary, yet under various pretexts the fort at Niagara, as well as those at Oswego and Detroit, was not surrendered until 1796, after the ratification of Jay's treaty; one of many proofs in the mind of Brother Jonathan that his friend stout John Bull takes hold with a good grip, and never lets go until he has to.

Several years of border warfare, between British forces on the one hand, American forces on the other hand, and Indian allies treacherous to both, are spoken of in history as the War of 1812. Though no direct advantage was gained by either side, this war had the important effect of teaching the English to respect American

rights by sea and land. That portion of the strife which was waged along the Niagara was generally disastrous to the Americans. In one of the most important engagements on this frontier, at the storming of Queenston Heights, Gen. Sir Isaac Brock was killed, October 22, 1812. The stately column which now stands on the Heights, seven miles from the Falls of Niagara, is a proof, reared before the eyes of Americans, that England does not neglect the memory of her hero sons. At the foot of the commanding height where the monument stands, an inscribed stone marks the place where Brock was killed. It was set in place by the Prince of Wales during his American visit in 1860. The whole region is beautiful; but no point on the romantic Niagara frontier better merits the attention of Americans and Englishmen alike than this. Here every year, on the anniversary of the battle, the descendants of brave British grenadiers who were participants celebrate the event; and with them join their neighbors from the American side of the river, who find it becoming to honor the memory of generous and noble enemies.

Our brief page of Niagara history has shown us French discovery in 1678 and French occupancy for eighty years; English occupancy for thirty-seven years; and since that time, American possession of one side of the river, and English possession of the other.

The ownership of the American side involves an interesting history of title, which may be briefly sketched. The Treaty of Paris in 1783 provided that the boundary line of the United States "shall be along the middle of Lake Ontario until it strikes the communication by water between that lake and Lake Erie, thence along the middle of said communication into Lake Erie." That was the original treaty of peace after the War of the Revolution. After the War of 1812, by the Treaty of Ghent, in 1814, it was provided that commissioners should determine the boundary line, and a distinction was made between the islands in the river and the main land. By decision of the commissioners appointed under this



Treaty of Ghent, made at Utica in the State of New-York, in 1822, was designated the following boundary line, which is still in force: The line runs "from the mouth of the Niagara River up the middle of said river to the great falls, thence up the falls *through the point of the Horseshoe*, keeping to the west of Iris or Goat Island." Human law has not changed this boundary, but natural law has. The point of the Horseshoe Fall is not fixed; in the last 60 years it has shifted very considerably; so that we have here a unique example of a fluctuating boundary line between two nations.

One word more, to finish this story of title. Back of the treaties were cedings of title from the Seneca Indians to the whites; in 1764, of both banks of the Niagara from Lake Ontario to the head of the rapids above the Falls, this grant including a strip four miles wide on the American side. By a treaty of 1802 the Senecas relinquished all claim to the American shore of the river, from the rapids above the Falls to Lake Erie, releasing a strip a mile wide. Thus the Seneca Nation parted with its possessions, which long before had been the birth-right of a now forgotten people. The State of New-York had ceded to Massachusetts all the territory west of about the middle of the State, with the exception of a mile strip on the Niagara, there being a dispute as to who owned this property under different English charters. Finally, by a treaty held at Buffalo, in 1815, the Senecas ceded to the State of New-York all the islands in the Niagara River, within the jurisdiction of the United States, for \$1,000 down and \$1,500 annually in perpetuity.



THE RIDDLE OF THE ROCKS.



IN BAKEWELL'S geology, a curious book published in London in 1833, is a marvelous picture of Niagara River. Lake Ontario is the foreground; the Niagara gorge is represented as a deep ditch, straight as a Dutch canal, running back to a strangely distorted cataract, and a hint, stranger yet, of the geography beyond. Under the picture we read that the receding falls have cut this deep canal through the rocks.

No doubt this is the general explanation of the wonderful gorge of Niagara which has been taught ever since the river became known to the world. Yet there have always been dissenters. A certain General Lincoln, who visited the Falls in 1794, wrote: "On a careful examination of the banks of the river there appears to be no good foundation for this opinion."

In 1841 and 1842, Sir Charles Lyell estimated the gradual recession of Niagara Falls, by the undermining of its brink, at the rate of about one foot per annum. When the commission having in charge the establishment of the State Reservation—or free park—at the Falls came to investigate the subject, Lyell's estimates were found to be erroneous. A map based on surveys of the Falls made in 1883, by Mr. Thomas Evershed, for the New-York State Surveyor, shows that in the 41 years ending in 1883, the annual rate of maximum recession has been six and one sixth feet. For the eight years, ending with 1883, the rate is given as $16\frac{1}{2}$ feet, so that of late years the rate of recession seems to have been higher than formerly.

No discussion before the session for 1886 of the American Association for the Advancement of Science aroused more general interest than did that relating to the geological history of the Niagara River. Unusual attention was paid to the subject by the geologists present, among whom were some of the best authorities in America on geological questions. Referring to the synoptical reports of the

proceedings of the Association we find several authorities reported in substance as follows :

Prof. W. M. Davis of Harvard University—Thinks the Falls were formerly at Lewiston (seven miles below where they now are), but “of no particular height” until after the subsidence of Lake Ontario.

Prof. T. B. Comstock of the University of Illinois—Believes there was no fall at Lewiston at any time.

Prof. R. S. Woodward of Washington—Finds from observations recorded, from 1842 to 1886, that the minimum rate of retrocession is 2.4 feet per year. At this rate it takes the Falls 2,200 years to recede one mile. Prof. Woodward is also reported as estimating five feet per year as the rate of retrocession.

Prof. G. K. Gilbert of Washington—Thinks that 7,000 years for the retrocession from Lewiston is a maximum estimate.

Dr. Pohlman of Buffalo—Reduces the time of retrocession to 3,000 years.

Now such inconsistency as exists in these conclusions is due to the fact that they are drawn from varying data. Moreover, a radical difference in theory exists as to the course of the prehistoric outlet of Lake Erie.

Hitherto the two great authorities on the retrocession of Niagara Falls have been Sir Charles Lyell and Prof. James Hall. As we have seen, the former held that it was approximately correct to allow about a foot a year for the retrocession. From the variable nature of the strata over which the river flows, the circumstances that affect the rapidity of the erosion differ all along its course. Eminent geologist that he was, Lyell had not the advantage of a series of actual observations. Previous to the careful trigonometric survey made in 1842, under the direction of Prof. Hall, for the New-York State Geological Survey, no marks or monuments had been fixed. Prof. Hall showed that after a further recession of about two miles the Falls will encounter a thick stratum which may permanently resist erosion, with their height reduced to about 80 feet.

There is no disagreement or uncertainty about the future of Niagara. With known conditions science is beautifully accurate. Hence, while the discussion of 1886, summarized in the foregoing, did not give the world an absolute dictum regarding the past of Niagara, it did bear fruit in illustrating the importance of scientific observation and record.

THE CHAIN OF RECENT CHANGE.



SOME years since (the story runs) a wealthy American lady, traveling in Europe, was asked the same question which had been propounded, years before, by Lord Byron: .

“Have you ever seen Niagara Falls?”

“Seen them!” our countrywoman is said to have rejoined, doubtless with a touch of amused indignation in her tone, “Seen them! *I own them!*”

Miss Jane Porter, the lady of whom the incident is told, had good grounds for her proud claim. In 1795 her grandfather, Augustus Porter, a hardy young American, marching westward through the wilderness at the head of a party of surveyors, to explore and lay out townships in “The Western Reserve,” first visited Niagara Falls. In 1805, with his brother Peter B. Porter and others, he purchased from the State a large tract at Niagara. Later on the Porters acquired, by purchase and by patent from the State, other lands in the vicinity, including the Goat Island group. This fortunate ownership was one of the sources of large revenue, which has been enjoyed, in increasing proportions, by the descendants of the original investors for over three quarters of a century.

The leading facts in the early history of Niagara Falls have been indicated. About the beginning of the present century permanent settlements were made on the Niagara. The pioneer succeeded the soldier and carried forward the work of conquest. Up to 1805 the neighborhood of the Falls remained a vast wilderness. The approach to the place from the eastward was through a forest-covered country, the home of the Indian and the wild beast. Indian lodges were numerous near the Falls when Augustus Porter visited them, and Indian canoes were often seen passing up and down the river. Bears foraged through the woods, deer abounded, notably on Goat Island, and wolves howled nightly around the roaring cataract.

For many years, even after the Indians and wild animals had disappeared, and the rattlesnakes, of which early travelers complain, had become scarce, sight-seeing at Niagara was an arduous undertaking. There were no buildings to speak of in the vicinity until 1815. In 1804 the poet Moore had found "an inn in the neighborhood of the Falls"; doubtless one of the structures, a mile or so above the cataract, which shared the fate of most buildings on the river bank in the War of 1812. Visitors at Niagara during this period lodged at Chippewa on the Canadian side, or at Schlosser's on the American side, above the Falls. Not until 1819, when Parkhurst Whitney built the Eagle Tavern on the present site of the International Hotel, did the era of Niagara Falls as a public resort begin. Even then, and for years thereafter, visitors were not numerous. Few Europeans visited America, and few Americans were rich enough to travel. The roads were bad for wheeled vehicles, and the place remote from all important towns, except Buffalo, which for many years after its total destruction in 1812 was important only by reason of its site and great expectations. The making of good roads, and the establishment of stage routes, first fairly opened Niagara to the world.

It is interesting to recall the romantic demesne of Niagara as it was in those days. There were a few saw-mills on the stream above the Falls, but the high walls of the rocky gorge below stood as Nature made them, bearing no mills or factories on their brink, spanned by no bridges, scaled by no toil-saving elevators. Goat Island was inaccessible, save by hazardous boating from above, until some years after the War of 1812, when a rude bridge was built to the upper end of the island. This



bridge was carried away by ice in 1817. Two years later a better bridge was built, reaching from the American shore to Bath Island, and from Bath Island to Goat Island. These bridges have had three or four renewals, the present structures being erected in 1856-7. The Sister Islands were not bridged until 1868.

In the early years visitors found some difficulty in getting to the foot of the Falls. On the American side a devious path was made, the more precipitous places being scaled by logs, set endwise, with notches on their sides for footholds. This was succeeded by a zigzag stair, a picturesque but wearisome structure, which in 1845 was replaced by the present hydraulic incline. The Biddle stair, a winding descent from Goat Island to the foot of the cliff between the American and the Horseshoe Falls, was built in 1829. On the Canadian side, for many years, the only descent to the foot of the Fall was by the "Simcoe ladder," a frail structure, erected at the expense of the wife of Gov. Simcoe, some three quarters of a mile down stream from Table Rock. From its base the visitor could approach by a dangerous path the foot of the Horseshoe Fall.

The Indians were the first ferrymen below the Falls. For some years after the tourist era began, the stream was crossed in log canoes, which were later replaced by heavy boats, and finally, in 1885, by the steamer *Maid of the Mist*, the third steamer so named which has plied on the lower Niagara. The railroad suspension bridge was completed in 1858; the cantilever bridge, just above it, in 1883; and the upper suspension bridge, 1,268 feet long, in 1868.

The changes which are constantly taking place at Niagara in the conformation of the Falls and rock ledges were remarked by the earliest visitors who had the advantage of any comparative data. The great Horseshoe Fall has become acutely angled, the point of most rapid recession apparently traveling up stream along a natural cleft in the limestone stratum which forms the bed of the stream. Table Rock has broken away repeatedly; in 1818, in 1828, in 1850—when the greater part of it fell, carrying with it a stage coach—and in smaller fragments since, until now there remains only a slightly projecting ledge, where once an enormous table of rock reached far out and at right angles to the Horseshoe.

In the "American Gazetteer" for 1804, edited by Jedediah Morse, D. D., a curious article on Niagara Falls contains this statement: "On Christmas night, 1795, a severe shock of an earthquake was felt here [at the Falls], and by which a

large piece of the rock which forms the famous cataract was broken off." The writer of the present essay has been unable either to prove or disprove the statement by any other authority. The region of the Great Lakes has been commonly regarded as exempt from seismic manifestations; yet, at the time of the Charleston earthquake, in 1886, credible persons living within 20 miles of the Falls alleged that they felt the shocks. There may have been an earth tremor in 1795 severe enough to cause a fall of rock at Niagara, but it is far more likely that the fall, if any occurred, was due to other and less extraordinary causes.

Formerly the Canadian side of the river from Table Rock both up stream and down stream was a cedar swamp. The removal of the timber, and other causes, natural and artificial, have wholly changed the character of the locality, which for many years has been occupied by large hotels, with fine public or private grounds adjoining. Within the memory of men eagles abounded there.

Little more than forty years ago there was a small island, situated near the middle of the west channel, and about opposite the center of Goat Island. It was thirty or forty rods

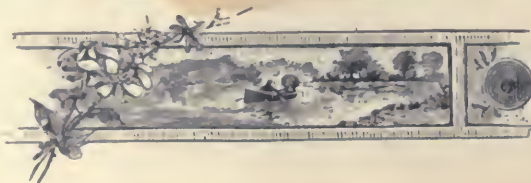
long, and two or three rods wide—a patch of rocks, tufted with cedars and bushes, hanging in the flood. Gradual erosion and perhaps changes in the mid-stream currents have entirely obliterated what early settlers knew as Gull Island. The poet Moore saw it in 1804, and admired its "tranquillity and unapproachableness."

These are some of the more striking changes which have been effected during the present century, in the natural scenery at Niagara. The changes in the character of the place as a resort have not been less marked.

X



FALL OF TABLE ROCK IN 1890.



NIAGARA IN LETTERS AND IN ART.



THE name, Niagara, is one which invites the English tongue to linger. More lingeringly yet was it pronounced by the Mohawk Indians, from whom the French explorers first may have heard it. They called it *Nyah'-ga-rah'*, with the primary accent on the first syllable, and the secondary on the last. A pronunciation sometimes heard nowadays by people who speak with affectation is *Nec-ah'-gara*, with the accent on the second syllable. Those who laugh at

this pronunciation are probably unaware that it is nearer the original word than is that commonly used. The Neutral Nation of Indians, from whose language the word is said originally to have come, are said to have had no labial sounds in their speech, all the words, as is the case with Niagara, being spoken without closing the lips.

As for the meaning of the word, some controversy has occurred. Schoolcraft, an eminent authority on Indian dialects, affirms it to signify *thunder of waters*; but this poetic interpretation is discredited by Marshall, a most careful and trustworthy student, who tells us that it means *neck*, in allusion to the connection between the two lakes by the Niagara River:

But whatever its source or significance, the first Europeans who learned of the river found it bearing its present agreeable name; though, with 39 different modes of spelling, it is to be expected that it occurs in various forms. Father L'Alle-mant, in a letter dated in 1641, at the mission station of St. Marie, on Lake Huron, refers to the river *On-gui-aah-ra*. Sanson's map of Canada, published in Paris in 1656, spells it *Ongiara*. Its first appearance as *Niagara* is on Coronelli's map, published in Paris in 1688. A hundred and fifty years before this the Indians had told Cartier, in the Gulf of St. Lawrence, of a great river and cataract in the

interior. This is undoubtedly the first historical mention of the Niagara, though that name does not appear in Cartier's narrative, nor does it, 78 years afterward, appear on the map which Champlain made, although he drew the river (quite erroneously), and mentioned its *saut d'eau* as "so very high that many kinds of fish are stunned in its descent!"

Father Hennepin is the first who published a detailed description of the Falls. With La Salle, he reached the Niagara in 1678, and shared in the building of the Griffon, the first craft other than Indian canoes which ever sailed the inland seas of America. Hennepin's description, one of the least inaccuracies of which was in making the Falls 600 feet high, was accompanied, at the time of its publication in 1698, by an engraved sketch, evidently drawn from memory, as it embraces a bird's-eye view of the whole river, as far as Lake Erie, with the Griffon in the distance. The two falls, with Goat Island between, and Table Rock, are grotesquely delineated; though the drawing is of great historical value, for it shows what striking changes have since taken place in the contour of the cataract. A group of Frenchmen, viewing the Falls from the American side, are represented as stopping their ears to shut out the deafening sound.

After Hennepin came Baron La Hontaine, who found the waterfall of Niagara "seven or eight hundred feet high and half a league broad."

It was reserved for Charlevoix, in 1721, to give the world the first reliable data about the place. He refrained from being overcome with awe, or from yielding to the desire, common with writers in every age, to impress the reader with vast figures. He measured the Falls, and declared them to be not less "than one hundred and forty or fifty feet," which was a very accurate measurement. The Falls are slightly higher now than then, for recession carries the precipice back on a sloping surface stratum which dips towards the brink.

The art and intelligence of the 18th century combined to make the world well informed as to Niagara. Peter Kalm, a noted Swedish botanist, visited the Falls in 1750, and afterwards published an interesting account of what he saw. The mention of this great naturalist's

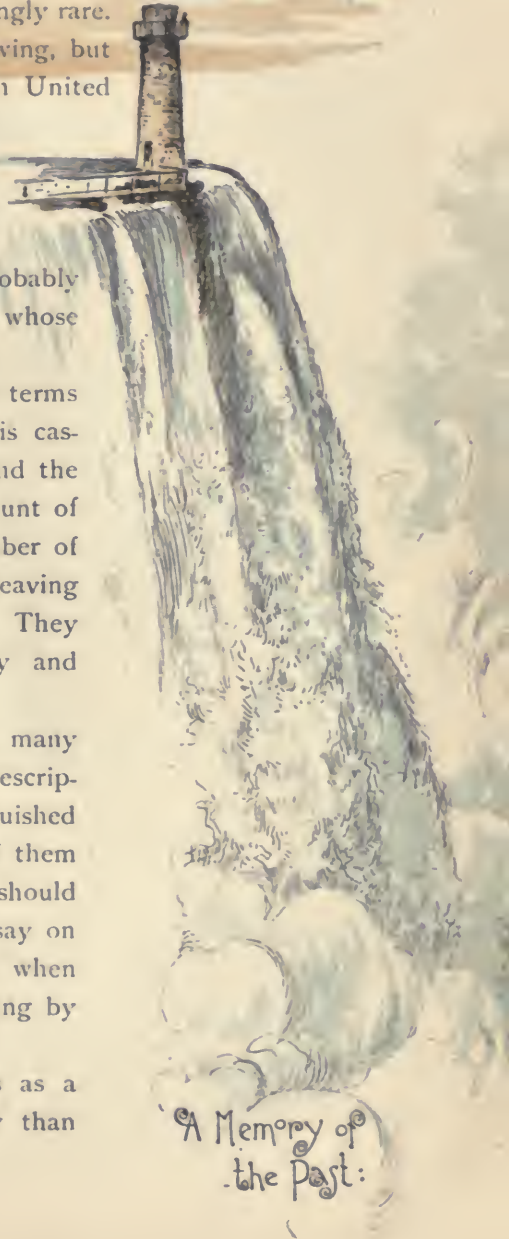


name in this connection calls to mind a fact which lends a livelier interest to the association. The devotee of botany, if he has pursued his favorite study in the United States, need not be reminded that of the numerous genus of plants called *Hypericum*, there is one which is exceedingly rare. On wet rocks at Niagara Falls it is found growing, but from few if any other stations in the Eastern United States is it reported. This plant is the rare "Kalm's St. John's-wort." (*H. Kalmianum*, L.) Here, spreading the pale gold of its petals in the perpetual mists of the great cataract, it persists and flourishes in the spot where probably it was first found by the devoted naturalist whose name it bears.

L' Abbé Picquet, in 1751, speaks in positive terms of the number of waterfalls. He says: "This cascade is as prodigious by reason of its height and the quantity of water which falls there, as on account of the variety of its falls, which are to the number of six principal ones, divided by a small island, leaving three to the north and three to the south. They produce of themselves a singular symmetry and wonderful effect."

After the middle of the 18th century, many famous men found their way to Niagara, and descriptions multiplied accordingly. Many a distinguished traveler has recorded his impressions, some of them in words wholly worthy of the subject. "I should find it difficult," wrote Moore in 1804, "to say on which occasion I felt most deeply affected; when looking at the Falls of Niagara, or when standing by moonlight among the ruins of the Coliseum."

No one has put his Niagara impressions as a stamp upon English literature more worthily than



A Memory of
the Past:

Charles Dickens. During his first American visit, in 1842, he spent ten days at the Falls. His fastidious soul revolted at much that was crude and inelegant in the new American society; but his censoriousness failed him utterly at Niagara. Of the view from Table Rock he wrote in the "American Notes": "When I felt how near to my Creator I was standing, the first effect, and the enduring one — instant and lasting — of the tremendous spectacle, was Peace. Peace of mind, tranquillity, calm recollections of the dead, great thoughts of eternal rest and happiness; nothing of gloom or terror. Niagara was at once stamped upon my heart, an image of beauty; to remain there, changeless and indelible, until its pulses cease to beat, forever."

In art as well as in literature Niagara has been repeatedly pictured to the world. Nothing would be more interesting than a gallery of Niagara studies, beginning with Hennepin's distorted drawing, first engraved and published in 1697. For very many years there was no other picture of Niagara. One of the earliest representations worthy the name of art was an oil painting, in size 72 by 54 inches, executed about 1770 by Richard Wilson, an English artist of repute, after a drawing made by Lieutenant William Pierie, of the Royal Artillery, in 1768. This soldier-artist, who was perhaps stationed at Fort Niagara, under Sir William Johnson, did a most admirable piece of work. He evidently labored *con amore*, not only for his art, but also for the sake of one who was perhaps a source of inspiration to his pencil, since he gave this dedication to his drawing: "To the Rt. Honble Lady Susan O'Brien, this View of the Cataract of Niagara, with the Country Adjacent, is Most Humbly Inscribed by Her Ladyship's most Obedt, Oblgd & Hmble Servt, Wm. Pierie." Not only did Pierie's drawing serve as the source of Wilson's painting, but also of an engraving on steel done by William Byrne, which was published, probably in London, in 1774.

So far as the writer has been able to discover, Pierie's is the oldest really artistic picture of Niagara Falls. The point of view occupied by the artist was very nearly that from which, in 1887, Paul Philippoteaux made his Master Study of Niagara. But how different the circumstances under which the two studies were made! Our latter-day artist looked out upon the cataract from a foreground showing long work for man's comfort and pleasure: a well-kept private park, pleasant residences, intrusive bazaars, and the colonnaded porches of a great hotel. One

hundred and eighteen years before, artilleryman Pierie probably had crossed the Niagara in a log canoe, toiled up along the cliffs, and, pushing his way through the cedars and hemlocks, gained a suitable ledge whereon to spend some busy hours of artistic communion with the vociferous solitude! There is no suggestion of exaggeration in his picture, unless it be in the river-bed below the Horseshoe, where the stream is shown as if heaped full of great rocks. In contour the Horseshoe does not belie its name as much as nowadays. There is a deep, unbroken flood pouring over the ledge near Goat Island, where now the stream runs thinly. The extreme western edge of the Horseshoe, too, shows a great body of water descending towards the east. It is very different now; and though there are several points in the picture which do not agree with the present condition of things, yet it bears every evidence of an honest and intelligent effort at fidelity. In the art history of Niagara Falls artilleryman Pierie's name deserves a worthy place.

In 1797, 100 years after Hennepin's sketch appeared, — Weld, an English artist of reputation, visited Niagara and made two splendid pictures of the cataracts. One of the grandest pictures of Niagara was painted by Gustave Doré, who never saw the Falls, but found a source of inspiration in the writings of the brilliant Chateaubriand, whose description in "Genie du Christianisme" undoubtedly furnished the material for Doré's great conception. It is worth noting in this connection that what has been praised as the best poem on the subject is an apostrophe addressed to Niagara by a writer who had never seen the Falls.* Among the multitude of artists who in recent years have made the scenery of Niagara familiar the world over, it has been reserved for Paul Philippoteaux to surpass all others in a grand effort to place upon canvas a Niagara which is at once realistic and artistic.



FAC-SIMILE OF FIRST ENGRAVING OF NIAGARA FALLS, 1698.

* John G. C. Brainard, in the *Connecticut Mirror*, formerly published at Hartford, Ct.

HOW THE FALLS WERE MADE FREE.



THE golden era at Niagara Falls came in with the railroad, which reached Niagara Falls village in 1836. Capacious hotels were built to meet the demands of increased travel. The American side of the river developed more rapidly than the Canadian side, and for a time it was the dream of "practical men" to build at the great cataract a new Manchester, which should be a chief manufacturing city of the new world; nor has this consummation ever been lost sight of.

But as a resort for pleasure and sight-seeing, Niagara flourished for 30 years. There began to be Americans of wealth and leisure, especially among the planters of the South and merchants of New England. They came to Niagara Falls with their families and servants, and stayed for weeks. The points of interest were explored and social life enjoyed to its utmost, so that "the season" at the Falls was as gay and as fashionable as at Saratoga or Ballston Spa—the latter long since fallen in public favor, outshone by its more fortunate rivals.

But evil days came. An era of "hard times," dating from the financial disasters of 1857, checked the throng of summer pleasers. The outbreak of the War between the States cut off the remunerative southern patronage, which has never been regained save in small measure. From the close of the War for a score of years Niagara Falls enjoyed a certain prosperity, but it was under changed conditions. Visited by throngs, there were fewer and fewer who made long sojourns; and not even yearly improvements in the hotels, and the addition of a multitude of novelties, succeeded in altering the character of the business. Private ownership of points of interest, and a willingness on all hands to make as much money as possible, begot an expensive and irritating system of fees and tolls and petty extortions, which won for Niagara a reputation, not wholly deserved, of being an excessively expensive resort. Nor was one side of the river any better than the other in this respect.



Moreover, every year saw more and more unbecoming encroachment upon a domain which thoughtful persons wished to see preserved inviolate. Cheap buildings were erected along the river, devoted to the sale of "curiosities" derived from anywhere and everywhere except the vicinity of Niagara. For many years a paper-mill had occupied one of the loveliest of the islands, and enjoyed the extraordinary water-power. There was a tendency to crowd mills and factories along the river, having chief regard to the desirable sites, and little if any concern for preserving unmarred the natural beauty of the neighborhood; and there would not have been



THE RAILWAY SUSPENSION BRIDGE.

lacking unsentimental souls who would have employed the great fall itself to turn their mill-stones and run their endless shafting, could mechanical ingenuity have found a way to utilize the power.

But Niagara's temporary degradation after all hastened the day of her salvation. Public sentiment was indignant at the state of things long before any effort was made to correct it. In the summer of 1878, Lord Dufferin, Governor-General of Canada, had a conversation with Governor Lucius Robinson of the State of New-York, concerning Niagara's fallen estate, and from this conversation is

reckoned the beginning of official action towards bringing about a better state of things. The idea was first publicly spoken of by Lord Dufferin in a speech delivered in Toronto before the Ontario Society of Artists, on September 26, 1878. In the following October, subsequent to the conversation with Governor Robinson referred to, Lord Dufferin formally brought the matter to the attention of the New-York State authorities in a letter to Governor Robinson, who laid the project before the Legislature in the following January, and recommended the appointment of a commission to consider the subject. A commission was accordingly appointed. Its report recommended the acquisition of the lands adjoining the Falls and the appointment of a commission to take the necessary legal measures. Canadians are justified in claiming for Lord Dufferin the credit of being the originator of the free park idea; Americans may continue to maintain that Governor Robinson deserves the honor of taking the first step to make the Falls free. As a matter of fact, all that either of them did was to become impressed (rather tardily than otherwise) with the public sentiment in the matter, and to recommend legislative action. Lord Dufferin urged the matter upon the Provincial Government of Ontario; Governor Robinson brought it before the Legislature of the State of New-York; and the slow machinery of legislation was fairly set at work on both sides of the river. Strange as it may seem, determined opposition was encountered, both in the form of private interests and legislative indifference. A feature of this battle which was waged against official hesitancy and stolidity was the sending to the Legislature of 1880 "a remarkable memorial asking for the enfranchisement of Niagara which had been addressed in duplicate to the Governor-General of Canada and the Governor of New-York by about 600 of the most eminent men of the United States, Canada and Great Britain," among them Prof. Max Müller, Sir John Lubbock, Thomas Carlyle and John Ruskin. Three years later the signature of Governor (now President) Cleveland made the "Park bill" a law.

When the news was received at Niagara there was great rejoicing. Up went the American flags on all the hotels on the American side, public and private buildings, and places of business. The hotels on the Canadian side joined their American cousins in displaying their enthusiasm by hoisting the Union Jack. On a memorable 15th of July, 1885, the New-York State Park at Niagara Falls was opened with ceremony, attended by 60,000 people, and declared free to all the

world. The 115 acres which constitute the park were bought from private owners, after long appraisal proceedings, for \$1,433,429.50.

While the honor of originating the scheme belongs to Canada and her most honored Governor-General, New-York State won the credit of being the first to take action. A conference of the New-York State Commissioners was held at the Falls in September, 1879, the Hon. Attorney-General Mowat and other Ontario Ministers being present. The Ontario Ministers, however, declined to act, on the ground that the work was national, and should be undertaken by the Dominion Government. The Attorney-General, in a report to the Lieutenant-Governor, made on December 9, 1879, contended that the Dominion Government would derive revenue from the proposed park, while the Province would gain no advantage. Pressure was brought to bear upon the Provincial Government, and in the session of 1885 "an Act for the Preservation of the Natural Scenery about Niagara Falls" was passed. By this Act authority was given the Lieutenant-Governor-in-Council to appoint three commissioners, whose duty it should be to select such lands as in their opinion should form the park. In April, 1885, Col. Gzowski, A. D. C. Q.; Mr. J. W. Langmuir, and Mr. J. Grant MacDonald were appointed. After examining the locality they reported to the Government, and the map which they submitted having been approved, the matter passed into the hands of the official arbitrators of the Province for their report upon values. For the purchase of 120 acres the Government appropriated \$550,000, an excess of what was paid. On Jubilee Day, June 21, 1887, the reservation was nominally opened and named the Queen Victoria Niagara Falls Park.

Like the reserve on the American side of the river, it was far from being in readiness at the time of opening; the work of improvement is still in progress on both sides; but the essential thing has been accomplished. Niagara is free to the world. Time and the good taste of those in charge of the work must be relied upon to restore the place, as far as may be, to an unsullied state of nature.



HOW TO SEE NIAGARA.



IT IS DR. OLIVER WENDELL HOLMES who gives these directions for seeing the British Museum: "Take lodgings next door to it * * * * and pass all your days at the Museum during the whole period of your natural life. At threescore and ten you will have some faint conception of the contents, significance, and value of this great British institution."

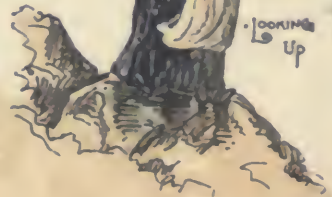
This is really the way to see Niagara, though very likely our English friends will be slow to believe it—ignorance of America, according to Charles Dudley Warner, being one of the branches taught in the English schools. In fact, the only person who could be expected to believe it would be one who had tried it. Niagara's most devoted worshipers are the old settlers, the men whose threescore and ten of years have passed within the sound of the cataract. And, strange as it may seem—but does not, because we have learned to expect such things—there are people in the vicinity who have never seen the Falls. Some of them are blind, some of them are new-born babes, and some of them don't care for scenery.

If one cannot see Philippoteaux's great painting, the next best thing is—to see Niagara itself!

We will suppose that you have reached Niagara Falls—it matters not on which side of the river—after nightfall; a fortunate time, since the darkness prevents any unlucky first impression from marring the after-study. You may not at once hear the roar of the cataract—the cries of the hackmen frequently drown it; but ere long you are sure to feel the shuddering of the air, the awesome atmospheric tremor that haunts the place, and is most strongly accentuated at night. A most fit prelude, this nocturne of Niagara, for the entertainment that is to follow. As you lie awake at your hotel listening to it, there will steal over the scene a profound recollection of the majesty of Nature, which mankind comes near to forgetting in the trivial turmoil of life.

Before going thither, you have equipped yourself with a general knowledge of the geography of the place. If not, do so before starting out. Make a fifteen minutes' study of your guide-book, which should inform you somewhat after the following fashion: The Niagara River is the channel by which the waters of the four great upper lakes flow toward the Gulf of St. Lawrence. It has a length of a little over 36 miles, and in this distance falls 336 feet. No data could be easier to remember than these, from their coincident similarity. At its mouth, where it empties into Lake Ontario, the Niagara is still 231 feet above the sea. The interruption to navigation occasioned by the rapid descent of the Niagara River is overcome on the Canadian side by the Welland Canal; while on the American side the communication between tide-water and the upper lakes was first effected by the Erie Canal.

From the northeast extremity of Lake Erie the Niagara flows northerly. It races past the northern part of the City of Buffalo at the rate of seven miles an hour, and then more gently, with a widening current, slackens to about two miles an hour, and spreads wide two arms to embrace Grand Island, a beautiful domain some seven miles long. About 18 miles from Lake Erie, and two miles below Grand Island, the river grows narrower and begins to descend with great velocity. This is the commencement of the rapids, which continue for about a mile, the waters falling in that distance 52 feet. The rapids terminate in the great cataract, the sheer descent of which is 164 feet on the American side and 150 on the Canadian. At this point the river, making a curve from west to north, spreads out to an extreme width of about 4,750 feet. Goat Island, which extends down to the brink of the cataract, occupies about one-fourth of this space, leaving the river on





MAP OF NIAGARA FALLS, SUSPENSION BRIDGE AND VICINITY.

the American side about 1,100 feet wide, and on the Canadian side about double this width.

Among the great cataracts of the globe — to continue briefly in cyclopedic language — the Niagara stands pre-eminent for the enormous volume of water that is carried over so high a precipice. There are many cataracts which descend from greater heights, but none which approaches it in volume of water. Nice calculators have decided that about 100,000,000 tons of water go over the Falls every hour; which, when you come to think of it, means no more to the average intellect than one million tons.

But it is enough; shut up the guide-book. Foot rules and pint cups are not needed at Niagara. Who wants a measurement of beauty, or asks for the statistics of sublimity? It is not necessary to ask a single question about nature in the neighborhood of Niagara.

A first general view of the great amphitheatre, over whose upper walls the



NIAGARA RIVER AND VICINITY.

river pours, and from whose lower end it mysteriously vanishes, is not easy to escape. The tourist is sure to see it, and, oftener than otherwise, to feel a sense of disappointment. The trouble is that we look *down* on Niagara. No one can look *up* at it without an overwhelming sense of awe. It is unfortunate that the conformation of the place does not admit the erection of a hotel (if there *must* be hotels at all) near the foot of one of the falls; so that the eager visitor, seeking a first view, may look up and see indeed "the windows of heaven" open and "the fountains of the great deep broken up."

Go, as soon as may be, to the head of the upper rapids. Choose the American side, and follow the stream down. See how it goes down hill; at first, a swift

Among the barbaric hordes of ancient days, whose mission was to profanate Nature and assault civilization, were two abhorred peoples, the Vandals and the Goths. They were the prototypes of two kinds of modern tourists. Attila, "the scourge of God," hath a vast progeny in the innumerable caravan of Smiths, Joneses and Robinsons, which roams the earth to-day. There are indeed, as of old, two most abhorred tribes: Those who carry off relics, and those who carve their names. They seek the fairest works of man and the divinest manifestations of nature, only to mar and deface. In the Great Hereafter there may be wretched souls who, sentenced to eternal perdition, will ask for fragments of the pavements of gold to take along with them as a souvenir. Yet others there may be, for virtue's sake having been allowed admission to the Place of Peace, who if not carefully watched will seek to carve Smith, Jones, and Robinson even on the Great White Throne.

All over Goat Island have these worms left their trail. The uncomplaining trees bear innumerable wounds. But Nature hath a gentle revenge; she cannot obliterate the scars, but in a few short years she obscures them so that none can know who was the wayfaring fool that did the deed.

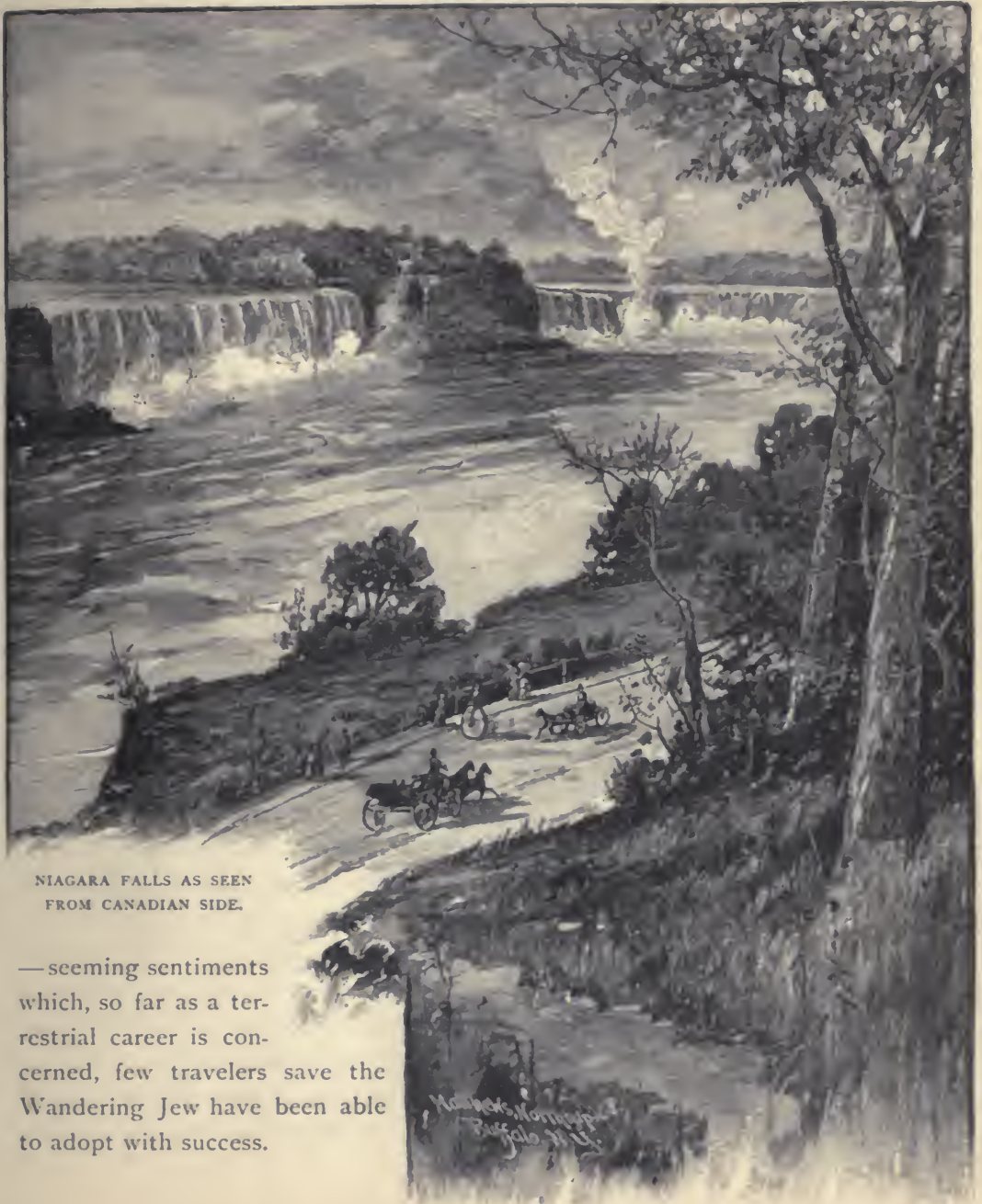
Some early dates there are, cut high on aged trees, which are of interest as showing that man was on this island long before there were any bridges to it. When Judge Porter first visited the island, in 1806, he found the date 1769 cut on a large beech; but the date and tree itself are believed to have disappeared. On the west side of the island, near the bridge to the first Sister island, is a tree whose bole is said to bear date 1790. It is best made out by people with eager imaginations. On Luna Island, a fair spot which divides the American Fall, is a stone on which some eccentric wight, with patience worthy a better occupation, years ago chiseled an inscription, of which now can be read:

* * * * DANGER

ETERNAL PROGRESS

No Death





NIAGARA FALLS AS SEEN
FROM CANADIAN SIDE.

—seeming sentiments which, so far as a terrestrial career is concerned, few travelers save the Wandering Jew have been able to adopt with success.

Harold H. H. H.
Buffalo, N. Y.

The infinite beauty of Niagara takes possession of one as he stands at the rail-protected edge of Luna Island, and notes the shining flood that falls to either side of him; a flood of sea-green and silver in summer, but often turgid and dark in winter. The distant prospect, too, is full of interest, especially when viewed from this point, as it may be in winter, through a frame of ice-bedecked cedar boughs.

A short walk from Luna Island, along the Goat Island cliffs, brings one to the Biddle stair, and thereby, clad in the clumsiest of oil-skins, to the Cave of the

Winds, which is simply the narrow place between the cliff and the falling water. You pass behind the small portion of the American Fall called Luna Island fall; and emerging between it and the great fall, may clamber about to your heart's content over huge and slippery rocks, across which board walks are built. The spray drenches and blinds you, but the experience is worth having.

The cedar-walled cliff-walk of Goat Island, as you go westward from the Biddle stair, soon brings you to a point where, pausing, you overlook the great Horse-



NIAGARA FALLS AS SEEN FROM FALLS VIEW STATION, MICHIGAN CENTRAL R'Y.

shoe Fall. A descending way, half path and half stair, conducts to Terrapin Point, at the American side of the vast triangular cliff over which the greater portion of the Niagara River plunges. About 1833 a rude stone tower was built at this point, but after 40 years of use, it was torn down because considered unsafe. The view from Terrapin Point is regarded as one of the finest at Niagara. It is also one of the most unsatisfactory. Although as near as it is possible to get to the bend of

the Horseshoe, the spectator is too near the level of the river to feel satisfied. He wishes for a balloon, floating midway over the stream, from which he could gaze down into the troubled heart of the cataract, and read its secrets.

Retrace your steps from Goat Island and enter the pleasant grounds at the eastern edge of the American Fall, which for many years were known as Prospect Park, but now form a part of the State Reservation. You may lean over the wall at the river's edge and look across to the islands you have just quitted. A hydraulic incline takes passengers to the base of the cliff, where a path penetrates behind the fall for some distance to a point called the Shadow of the Rock; but since the State has owned Niagara visitors are no longer conducted there.

Cross Niagara, from a landing near the foot of the inclined railway, on the little steamer Maid of the Mist. Leaving the dock, it runs up stream, past the American Fall, which seems vastly higher, as you look up at it from the deck, than it did as you gazed down from Luna Island. Over a river that is nothing but eddying, boiling foam, as white as buttermilk, the little boat makes its way towards the Horseshoe Fall; nor does it pause until it has pushed its audacious bow well into the boiling cauldron, into the eternal mists that shroud this Holy of Holies. Then, as it yields to the force of a "boiler" that wells up from the unknown depths, it slides swiftly back, stern foremost, until in less troubled waters it can turn and hasten to the landing on the Canadian side.

The whole panorama of the stream is best seen from the Canada shore. After visiting Termination Rock, at the foot of the Fall, and passing behind the northern edge of the great Horseshoe, whose waters fall in front of you, a mighty veil a dozen feet thick, visit above the cataract the lovely Cedar and Clark Hill islands; then, returning on the Canadian side to a point about opposite the American Fall, take in the panorama, as Bayard Taylor used to say, "by eyefulls." There is much of interest to note besides the impressive natural scenery of the place. At your left, the airiest, lightest of suspension bridges spans the gulf—a bridge 1,268 feet long, hung 200 feet above the river, which is 190 feet deep! The opposite American bank, below the bridge, seems to have been struck by the rod of Moses, for from the rocky face flow many living streams—cascades of such volume and beauty that, anywhere but at Niagara, they would be reckoned of great interest. They are the falls from flumes and races and tunnels which furnish water-power

to the mills on the bank above. Letting the eye travel westward, over the spires and walls of Niagara Falls village, the rapids above the Falls and the domed foliage of the islands form a picture of surpassing loveliness. Where the water of the Horseshoe Fall is deepest—the stream is said to be twenty feet thick at the edge of the cliff where it falls—the water is of the purest emerald green. It contrasts vividly with the white and grays of the rapids above and the mists below. Over all rise the high Canadian bluffs, crowned by an Academy whose walls stand out strikingly against the sky.

The mist is the great conjurer at Niagara. In calm weather it rises, a white column against the sky, like the pillar of cloud of old, or the smoke of a perpetual sacrifice on an awful and insatiate altar. It sweeps the fringes of its robe over the face of the falls, silver at midnight and golden at noon. On its shifting curtains the sun paints innumerable bows, and the pale moon draws her magic circles. In winter, its witching hands work marvels, fashioning a crystal casing for the trees, and raising a mighty mountain of ice-adamant on the rocks at the foot of the American Fall. The much-vaunted ice-scenery at Niagara is chiefly the work of the frozen mist. The ice-bridges, which form nearly every winter below the Falls, are caused by the massing together, in the narrow gorge, of broken ice which has come over the precipice from the river and lake above. Thus it happens that the torrent, at a point where it never freezes, may often be crossed on ice, roughly but firmly impacted together to a thickness of forty feet.

The visitor at Niagara is not long in discovering that to see the Falls is not to see all. Not only the river above and below, but the country round about, contains much of natural or historic interest. From the Falls to Lewiston, seven miles, the river rushes through a narrow gorge, with walls from 150 to 300 feet in height. About two miles down this passage is the so-called Whirlpool, a vast pocket in the encircling cliffs;—an elbow in the river, which leaves the place almost at right angles to the direction of its entrance. The word "whirlpool" is a misnomer; for there is no maelstrom of concentric currents. Between the Whirlpool and the Falls the river presents some remarkable features. For a mile below the cataract, although full of eddies and currents, it is comparatively placid, with little fall. But below, the walls of the gorge approach, and the river rushes down an inclined plane, its confined flood breaking into the most terrific waves. "A

run bit of water," said Capt. Webb, on a memorable day in 1883, as he looked at it from above. It is a hell of waters. From the river's edge at the further side of the Whirlpool—a wild spot which a man can gain without great difficulty—it is seen, as it cannot be discovered from above, that the Niagara almost falls into, rather than flows into, the Whirlpool, so great is its descent in the upper Whirlpool rapids. Its impetuous stream rushes across the place of the Whirlpool, then turns back upon itself, by up-stream currents on either hand. That part of the stream which sweeps to the left is again caught in the central current, and thus forms, on the Canadian side, an elliptical current. The main part of the stream, turning sharply to the right, rushes away through yet wilder rapids, towards Lewiston and Queenston, where the gorge ends; and then pursues a more placid career to Lake Ontario, seven miles further on.

The Whirlpool, and in fact the whole of the river below the upper suspension bridge, is private property. The various elevators, stairways, and other points of access to the view are zealously guarded and must be well paid for if their privileges are to be enjoyed. Various projects are afoot for making this most romantic portion of Niagara more accessible to the public, among them schemes for narrow-gauge railways through the gorge (where possible) near the water's edge. Intelligent sentiment, however, both in the United States and Canada, unites in hoping that in due time this incomparable scenery may be included in the Government reservations, and made free, or as nearly so as practicable, to the public.



A STUDY OF THE ROAR.

HENNING a poem from Buffalo to the Hon. W. R. Spenser, in 1804, the poet Tom Moore wrote:

Even now, as wandering upon Erie's shore
I hear Niagara's distant cataract roar.

Among the multitudes who visit Niagara there is now and then one who goes to hear as well as to see. If one have a liking for curious inquiries, he will find the so-called roar of Niagara a diverting and not altogether profitless study.

Incredible as it may appear to anyone who only knows the region of the Niagara as it now is, it is by no means necessary to regard the words of melody-loving Moore as mere poetic imagery. When he was "wandering upon Erie's shore" at Buffalo, he was about twenty miles from the cataract, in a direct line, and may actually have heard the Falls. One of the oldest living residents of the Niagara frontier* has told the writer that many a time, in the early years of his residence in Buffalo, where he settled in 1827, he has heard of a still evening the roar of the distant cataract. With such evidence it is unnecessary to dwell upon the accounts of Hennepin, who, as may be expected, outdoes all who come after him by declaring that the waters make "an outrageous noise, more terrible than that of thunder; for when the wind blows out of the South their dismal roaring may be heard more than fifteen leagues off. * * * * I know not if the Iroquois, who formerly inhabited near this fall, withdrew themselves from its neighborhood lest they should likewise become deaf, or out of the continual fear they were in of rattlesnakes, which are very common in this place."

It is probably unnecessary to add that very few people can be found nowadays to share in the good *Père's* fears of deafness at Niagara. Many a tourist will say

* The Hon. Lewis F. Allen of Buffalo.



from his experience that the roar of the Falls or some other potent influence has apparently improved the hearing of the people who live thereabouts and thrive by serving the traveling public; for none are quicker than they to hear a call that gives them a job, or to detect the chink of money in the tourist's pockets.

It seems to have been reserved for Mr. Oscar Wilde to supply the only modern estimate of Niagara's roar which is comparable to Hennepin's. In February, 1881, Mr. Wilde, inspired by a brief visit at Niagara, wrote in an autograph-album:

The roar of these waters is like the roar when
 "The mighty wave Democracy breaks on the shores where Kings lie couched at ease."



NEW CANTILEVER BRIDGE, CONNECTING NEW-YORK CENTRAL AND THE MICHIGAN CENTRAL RAILWAYS.

The force of Mr. Wilde's simile may be more apparent in lands enjoying greater familiarity with couched kings than any to which America can lay claim.

But the day is long since past when the roar of Niagara can be heard at Buffalo, or at so great a distance in any direction. Whistles and bells and all the offending signals with which civilization assaults the palpitating air, overwhelm the primeval sounds. The listener may approach as near the great Falls as Grand Island, two miles above in the river, before the muffled music of Niagara will

strike his ear. Even within a mile of the cataract nearer noises and intervening buildings will frequently make it impossible to distinguish the sound of the Falls. Below the Falls, the high walls of the gorge shut in the sound, so that at certain points, even remote, it may be heard with surprising distinctness. Doubtless the prevailing winds, which are from the southwest, and the conformation of the country, combine to make the Falls audible much more plainly to the northward than in any other direction. Often on a still evening in summer, or a hushed and breathless night in midwinter, the listener at Queens-ton Heights, where Brock's stately column towers skyward, seven miles from the cataract, may both hear and feel the mighty vibrant diapason of Niagara.

One of the most ingenious and interesting studies ever made at Niagara Falls was by a young American musician, an organist,* who brought to bear upon the problem much scientific skill and musicianly interpretation. His studies convinced him that there *is* no roar at Niagara. He found that the mighty voice was like the full tone of an organ, "the noblest and completest diapason on earth; for nothing else on earth, not even the ocean, reaches anywhere near the actual depth of pitch, or makes audible to the human ear such a complete and perfect harmonic structure." He found that an organ-pipe, to give the key-note of the Falls, would be, almost to an inch, 160 feet high, which is the actual average height of Niagara. By his demonstration, the tone proves the height, and the height the tone. The latter, it is claimed, is note for note the dominant chord of our natural scale in music. Here has nature given us a dominant, to last as long as man shall last.

* Mr. Eugene Thayer. See "The Music of Niagara," in Scribner's Monthly, February, 1881.



NIAGARA AND THE TOURIST.



THE CHANGES which the years have brought in the character of "patronage" at Niagara Falls have been noted. The well-to-do family which formerly came and stayed for weeks is now the exception, not the rule. It has been succeeded, in some measure, by the mammoth excursion. The New-York Central & Hudson River Railroad to the eastward, and the Michigan Central to the westward, constitute a great and popular highway by which the tourist, in 15 hours from Boston, 12 hours from New-York, and 14 from Chicago, may reach Niagara Falls, finding his advent rendered doubly pleasant by the extraordinary facilities enjoyed there by those roads.

A proof that there are yet tourists who spend money at Niagara lies in the fact that it is pre-eminently a place of bazaars. Formerly the Indians, a few of whom still live on a reservation near by, were the interesting vendors at Niagara of articles of their own make; but they have been succeeded by a more enterprising generation of shop-keepers, whose petty stalls and pretty stores, lining the streets of the villages on both sides of the river, are filled with so-called "curiosities."

Niagara belongs peculiarly to the newly-married. Its popularity as a resort for bridal couples has been maintained alike through years of prosperity and of dullness. Only an unwedded philosopher could find a satisfactory explanation. It may be that Nature's teachings at Niagara are unusually explicit and applicable. It is indeed an excellent place to develop humility. It was Dr. Holmes who said: "One is almost ashamed of his little paltry heartbeats in the presence of the rushing and roaring torrent of Niagara."

In this sketch have already been noted the tributes which were paid the great cataract by travelers in years long passed. In recent years, too, Niagara has been visited by hosts of distinguished people. In 1879 His Excellency the Marquis of Lorne, then Governor-General of Canada, and Her Royal Highness the Princess Louise and suite, spent four days exploring the wonders of the neighborhood.

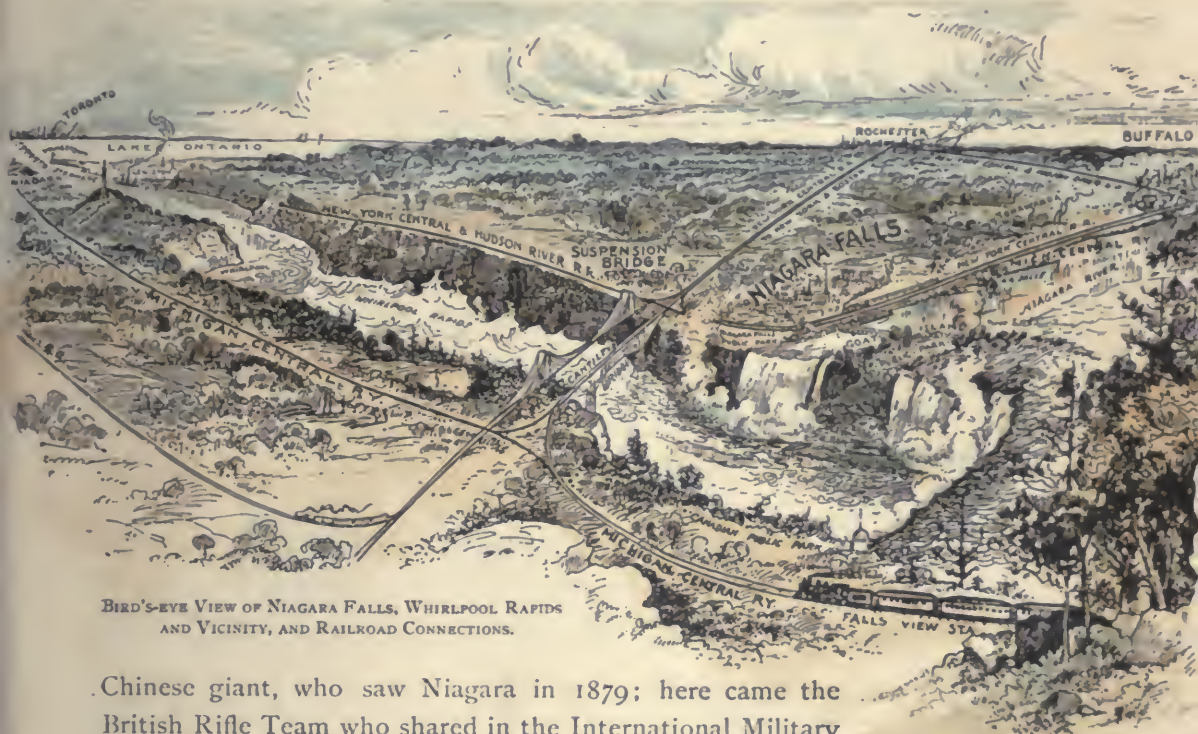


The next year the Princess Louise paid the Falls a second visit in company with His Royal Highness Prince Leopold, K. G., and suites. Prince George of Wales enjoyed a visit at Niagara in September, 1883. His Excellency the Marquis of Lansdowne, Governor-General of Canada, the Marchioness of Lansdowne, and suite, were guests there in January, 1884, and have paid subsequent visits to the place. It would take many pages to name even the very eminent persons who have visited Niagara within a few years. From England there have come Lord Chief Justice Coleridge and his son—the latter of whom, with some young

American gentlemen, enjoyed the rare experience of a bath in a rock-enclosed pool at the foot of the American Fall; Gen. the Hon. Sir E. Silby Smith, N. C. M. G.; Lord and Lady Harris; Lady Ellen Blackwood; Ernest R. Wilberforce, Canon of Winchester; Sir Henry Wilmot, Bart, M. P.; A. W. Roffen, Bishop of Rochester; Earl Grosvenor; Sir Charles Stewart; Sir Charles Rose; and, in short, an “innumerable caravan,” from all the courts of the civilized world, and from all distinguished walks in life. Many of the noble visitors and those of official station were guests at a pleasant little hotel called the Prospect House, which for fourteen years stood on the edge of the cliff near Table Rock ledge. It was the nearest human habitation to the great Fall; standing so near, indeed, that in summer it was usually enveloped in the drifting mists which perpetually pour upward from the chasm, and in winter encased in a shining envelope of frozen spray. This hospitable inn, of which many an Englishman cherishes pleasant memories, was ordered torn down and removed, in the fall of 1887, by the Commissioners of the Queen Victoria Niagara Falls Park.

In an album which was kept at this house many prominent people recorded briefly their impressions. It was in this book that Sarah Bernhardt, in 1881, wrote “*avec enthousiasme*,” the following: “*Que Dieu est bon d'avoir crié de si belles choses!*”. Here, too, Henry Irving and Ellen Terry left their

autographs, the former reserving his "impressions" for his own agreeable book. Sidney P. Hall, war artist of the London *Graphic*, left only his name without a hint of a sketch. Here we read the autograph of S. Tingfau Chang, the



BIRD'S-EYE VIEW OF NIAGARA FALLS, WHIRLPOOL RAPIDS AND VICINITY, AND RAILROAD CONNECTIONS.

Chinese giant, who saw Niagara in 1879; here came the British Rifle Team who shared in the International Military Match with America in 1882; followed by that gallant soldier, William Booth, General of the Salvation Army. Many grandees, Presidents of South American republics, or deputations from oriental lands, have shared the privilege of recording their names and ideas about Niagara. The German baroness Eggert, whose worth is not to be gauged by her command of English, wrote that she "has never pleased with anything in the world she went all through, so much as with the sight of the Niagara." It was reserved, however, for a French vicomte, whose globe-trotting had brought him to Niagara's brink, to write with a true touch of Gallic wit: "*C'est bien beau à Niagara, mais ce serait encore plus beau si c'était plus pris de Paris.*"

COMEDY AND TRAGEDY.



BELIEF existed among the Indians, it is said, that Niagara demands a yearly sacrifice of two human victims. It is more than likely that the Indians never had any such belief, though it might very well be warranted by the facts. The victims of carelessness or folly at Niagara probably will average more than two a year. There have been accidents or suicides at well-nigh every accessible point of danger. Careless people have fallen from the cliffs, insane people have jumped from the bridges, foolhardy people have been drawn over the Falls through venturing too near on the stream above. Oddly enough, many people who have resolved on suicide go to Niagara only to die by their own hand. A year or two ago a gentleman from a distant city came to Niagara Falls. It was midwinter, and the ice-bridge was formed. He walked out to midstream and coolly shot himself with a revolver — a proceeding which manifestly had no connection whatever with Niagara as a place for suicide.

No one has ever passed over the Falls and lived. The bodies of unfortunates who are carried down are usually found, days afterward, in the river at Lewiston, oftener than not dismembered and broken.

For many years Niagara has been the theatre of feats of daring and hazard. Sam Patch seems to have begun it. A good many years ago he set up a ladder, 100 feet high, at the water's edge under Goat Island, and from the top of it leaped twice into the river, unhurt. He afterwards jumped to his death at the falls of the Genesee River, at Rochester.

In 1858 Blondin, the great rope-walker, began his exhibitions at Niagara. His rope was stretched over the chasm below the railway suspension bridge, and here he performed a variety of rope-walking feats, fortnightly, for a long time. In 1860 he had a special "ascension" for the Prince of Wales and his party.

There have been other rope-walkers at Niagara since Blondin, but none whose skill and daring equaled his. The latest of them, Stephen Peere, was killed June 25, 1887, by a fall at night, either from his rope or the bank near by.

The Whirlpool rivals the Falls as the scene of exciting and tragic events. Nothing which has ever happened at Niagara surpasses in thrilling features the first navigation of the Whirlpool. The passage of the steamer *Maid of the Mist* has become world-famous. She was built to ply, as her predecessor had done, and as her successor now does, as a ferry and excursion steamer at the foot of the Falls. The business did not pay, and it was decided to hazard a trip to Lewiston, seven miles on the wildest river man ever undertook to navigate, for the purpose of selling her. It was in 1861 that with Joel R. Robinson as pilot, an engineer and assistant, the fearful trip was undertaken and quickly accomplished, though with much injury to the boat. It is related of the brave Robinson, who died a few years later, that he came home from the trip looking twenty years older than when he set out. He was a courageous man, the hero of several daring rescues at Niagara, and his name should always have an honored place in the chronicles of the great river.

Of late years, the most daring feats at Niagara have been attempts to go through the Whirlpool. Captain Matthew Webb, the great English swimmer, undertook to swim down the Whirlpool rapids and through the Whirlpool, July 24, 1883. How far he went alive is not known. Several places are shown by officious guides where he was last seen alive. His body was recovered four days after, at Lewiston.

Three years later, a Boston policeman named Kendall visited the Falls and by wearing a life-preserver actually swam—or was borne by the current—through the Whirlpool rapids and across the Whirlpool, where he managed to reach the shore, exhausted. His feat, however, is in no sense comparable to Webb's undertaking, for Webb entered the water wearing only a breach-cloth, and relying solely upon his own extraordinary prowess.



Less daring souls, too, having in view cheap fame and a possible financial return, have "navigated" the Whirlpool snugly hidden in great barrels, built for the purpose. The first ingenious gentleman who accomplished the passage was Carlisle D. Graham, a cooper of Philadelphia. Emulating him, came Messrs. Potts and Hazlitt, coopers of Buffalo, who tucked themselves into a barrel together and made the passage; and finally Mr. Potts and a relative, Miss Sadie Allen, accomplished it. So far as known Miss Allen is the only living woman who ever went through the Whirlpool, a unique honor which no doubt she fully enjoys. When it is remembered that these barrels are massive affairs of oak, ballasted and rigged with many small contrivances, and that the current runs at such a rate that the entire passage to Lewiston occupies scarcely more than twenty minutes, the valor of the barrel navigators is seen to be of a rather cheap kind after all. Far more practical than they was Mr. C. A. Percy of Suspension Bridge village, who, in August, 1887, safely went through the Whirlpool and rapids in a lifeboat of his own construction.

Other adventurous feats at Niagara might be related, did space permit; and many other freaks and feats of nature or of man. Something new is constantly happening there; but to the lover of nature, none of these things takes from or adds to the incomparable majesty of Niagara,

"Nature's Grandest Wonder."



PAUL PHILIPPOTEAUX.



DOUBTLESS the name of no artist is destined to be more honorably associated with the Falls of Niagara than is that of Paul Philippoteaux, whose latest and greatest work is the most ambitious painting of Niagara ever attempted. But M. Philippoteaux was well equipped for such an undertaking. Born in Paris in 1846, from his earliest years he showed a remarkable natural aptitude in art matters, and at the age of ten began receiving instructions in the first elements of art painting from his eminent father, the late Felix Philippoteaux, one of the masters of the French School, whose many historical paintings have



P. Philippoteaux

been bought by the French Government for the Versailles Gallery and other national museums of France.

At the age of sixteen Paul Philippoteaux studied under Cabanel and Leon Cogniet, with both of whom he was a favorite pupil. While at the "Ecole des Beaux Arts" he obtained several first medals, was admitted as No. 1 for the "Prix de Rome" examination, and received other high honors.

He is to-day among the foremost of the artists of Paris, where his paintings in the "Salon" are very highly esteemed, and the general verdict is that Paul Philippoteaux is undoubtedly now the *greatest and most famous historical painter* in the world.

The great success attending the production of his first Cyclorama, The Defense of the Fort d'Issy induced him to paint the following Cycloramas:

Taking of Plevna (Turco-Russian War); Passage of the Balkans. Both on Exhibition in St. Petersburg. The Belgian Revolution of 1830; The Attack of the Park. Both formerly exhibited in Brussels. The Battle of Tel-el-Kebir, at the Crystal Palace, London. La Derniere Sortie (with his father).

And four different Cycloramas of the Battle of Gettysburg, now on exhibition in Chicago, Boston, Philadelphia, and Brooklyn.

Philippoteaux says himself that this picture of Niagara Falls *is the greatest effort* of his life, and surpasses all his other works in truthfulness, coloring and nicety of detail.

The canvas of Niagara is four hundred feet in circumference and fifty feet high, consequently measuring twenty thousand square feet, and is on exhibition in York Street, Westminster.

ADRIEN SHULZ.

This artist was born in Paris, February 7, 1851. A pupil of E. Dardoize in 1875. His paintings were exhibited for the first time in the "Salon" of 1876 and, in 1877, he became the favorite pupil of H. Hanoteau. His paintings were also exhibited in the "Salons" of 1876, '77, '79, '81, '83, '85, '86, '87, and he has been engaged for the last few years in painting, under M. Philippoteaux, numerous Cycloramas on exhibition in America, among which was the famous "Gettysburg." He did much excellent work on the picture **Ni**agara.



PRESENT MILLING DISTRICT, NIAGARA FALLS, N. Y.

THE WATER-POWER
OF THE
FALLS OF NIAGARA

APPLIED TO MANUFACTURING PURPOSES.

THE HYDRAULIC TUNNEL
OF
THE NIAGARA FALLS POWER COMPANY.

AN ACCURATE DESCRIPTION OF ONE OF THE GREATEST INDUS-
TRIAL UNDERTAKINGS OF THE AGE,
WITH
PLANS, MAPS AND ILLUSTRATIONS.

PUBLISHED BY THE
BUSINESS MEN'S ASSOCIATION
OF
NIAGARA FALLS, N. Y.

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BUFFALO, N. Y.
ART-PRINTING WORKS OF MATTHEWS, NORTHRUP & CO.
Office of the "Buffalo Morning Express."

1890.

INTRODUCTION.

THE Business Men's Association of Niagara Falls, New York, issues this volume to make more generally known the success of the Niagara Falls Power Company in bringing about the construction of the great Hydraulic Tunnel, the adaptation of the vast water-power of the Falls of Niagara to manufacturing purposes, and to bring to the notice of manufacturers, capitalists, and the public generally, the details of one of the most important, scientific, and manufacturing enterprises of the age. The investment of over three millions of dollars of outside capital at Niagara Falls also prompts a desire on the part of the citizens of the place to co-operate in bringing about the fullest development of this great undertaking.

The magnitude of the great cataract, and its fame as a natural wonder, have heretofore, to a certain degree, excluded from thought the idea of its marvelous utilitarian properties, but the recent development of electrical science and the far-reaching enterprise of to-day, have now combined to subject to the uses of mankind a portion of the power of the Falls, developed at such a distance from the great cataract as not to interfere in any way with the natural beauty of the scenery.

We believe that a careful perusal of these pages, and an examination of the accompanying plans, maps, and illustrations, devoted to a locality full of historic interest, famed for its features of natural grandeur, and destined to have an important bearing upon the manufacturing interests of the country, will richly repay the manufacturer, the capitalist and the workingman.

The Business Men's Association of Niagara Falls, N. Y., will welcome inquiry from every quarter, and will furnish all information that may be desired by correspondents. We invite personal investigation and examination here upon the ground, and will be always ready to accompany visitors coming to Niagara for that purpose. We also bespeak your assistance in making known the contents of these pages to others, who may be benefited by them.

Address all communications to

THE BUSINESS MEN'S ASSOCIATION,

NIAGARA FALLS, N. Y.

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OF
THE BUSINESS MEN'S ASSOCIATION
OF
NIAGARA FALLS, N. Y.

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TABLE OF CONTENTS.

	PAGE.
Introduction,	5
Officers of the Business Men's Association,	6
The Water-Power of The Falls of Niagara Applied to Manufacturing Purposes,	9
The Old Mills,	10
The Hydraulic Canal,	10
The Demand for additional reliable Water-Power,	16
The Development of Electrical Science,	17
The Hydraulic Tunnel,	17
The Niagara Falls Power Company,	19
Mill Sites,	19
Plans of The Niagara Falls Power Company,	21
The Construction Company,	24
To Manufacturers,	25
Shipping and Railway Facilities,	28
Homes and Investments at Niagara Falls,	33
The State Reservation at Niagara,	36
Historic Points,	42
The Queen Victoria Niagara Falls Park,	42

ILLUSTRATIONS.

	PAGE.
Present Milling District, Niagara Falls, N. Y.,	Frontispiece.
Niagara River from Lake Erie to Lake Ontario,	9
Niagara Falls and Vicinity, including Tunnel Lands,	12, 13
American Rapids Above the Falls,	15
Level of the Chain of Great Lakes,	16
Profile of Tunnel and Canal,	17
Wheelpit,	18
Section of Canal Tunnel and Wheel Pits,	20
Cross Section of Tunnel,	21
Plan to Develop 2,000 Horse-Power,	22
Falls of Niagara from Canada Side,	26
Railroads at Niagara Falls and Vicinity,	29
Railway Cantilever Bridge at Niagara,	30
Horse-shoe Falls from Goat Island,	31
Map of the Falls of Niagara,	32
Fac-Simile of First Illustration of Niagara Falls,	34
Falls of Niagara from Prospect Park,	35
Railway Suspension Bridge at Niagara,	37
Whirlpool Rapids,	39
New York State Reservation at Niagara and The Queen Victoria Niagara Falls Park,	41
Map of Niagara Falls and Vicinity,	43
The Whirlpool,	45

THE WATER-POWER OF THE FALLS OF NIAGARA

APPLIED TO MANUFACTURING PURPOSES.

FOR many years it has been a matter of frequent comment, that at Niagara there existed an enormous water-power not utilized. Foreigners visiting the locality expressed their astonishment that a people so inventive and enterprising as the Americans should allow the unlimited power of Niagara to waste itself away without attempting to divert a fraction of the force flowing by their doors, to increase the material prosperity of their country.

The feasibility of applying a portion of the power of the cataract to the comforts and necessities of mankind has been discussed for many years by the scientists and manufacturers of America, and several undertakings for the utilization of so much of the water-power as the immediate locality required, were carried out by local enterprise, but the limited demand for water-power in a comparatively new and undeveloped country, and the existence of many small water-powers in the New England States and other sections of the country, permitted this



NIAGARA RIVER FROM LAKE ERIE TO LAKE ONTARIO.

great natural reservoir, of power, at Niagara to remain practically untouched until the removal of the forests impaired and in many instances destroyed the water-powers at other places.

THE OLD MILLS.

The early French explorers and traders, impressed by the magnitude of the water-power at Niagara, built a mill beside the rapids just above the Falls. In colonial times the British selected a site in the same neighborhood and erected a mill, used for preparing timbers for fortifications along the river. Immediately below were subsequently erected the Stedman and Porter mills, the first structures of the kind on the Western frontier. These were soon followed by the construction of two large raceways, which were used by manufacturing establishments, as was also Bath Island, situated in the rapids above the American Falls.

THE HYDRAULIC CANAL.

The water-power at Niagara was first utilized on a large scale by the construction of the Hydraulic Canal, about three-quarters of a mile in length, commencing at a point on the shore of the river above the Falls, where the water is deep and navigable, and terminating on the high bank of the gorge below the Falls. The cliff along the bank of the river near the lower termination of the canal is occupied by the large manufacturing establishments shown in the illustration of the Milling District (frontispiece).

The Cataract Mill, the first mill established on the Hydraulic Canal, was erected by Charles B. Gaskill in 1874. The capacity of the mill has been largely increased. It now turns out 700 barrels of flour per day. The Canal became the property of Jacob F. Schoellkopf to whose enterprise and foresight the development of Niagara Falls as a manufacturing center is largely due.

The erection of the flouring mill of Schoellkopf & Matthews was commenced in 1877. It started with twenty-two run of stone, and by reason of the power and shipping facilities, became so successful that it was necessary to increase the capacity. In 1881 it was remodelled, the stone replaced by rollers, and the product increased to 2,000 barrels per day.

When the Niagara Falls Hydraulic Power & Manufacturing Company became the owners of the Hydraulic Canal other manufacturing industries increased. The Niagara Wood Paper Company erected a mill for the manufacture of Wood Pulp. Owing to the abundant and steady power, the place proved to be particularly well adapted to that industry, and a second mill was soon after erected by John F. Quigley. A third mill, now the property of the Cataract Manufacturing Company, was subsequently established. All of the pulp mills have since erected additions fully as large as the first structures. The Niagara Wood Paper Company and the Cliff Paper Company have added machinery for the manufacture of paper.

When the mill of the Niagara Falls Paper Manufacturing Company was appropriated by the State of New York at the establishment of the State Reservation at Niagara, in the year 1885, the Pettebone Paper Company erected a larger and better mill, in the milling district. In 1889 an addition to the establishment was built and the capacity of the mill doubled.

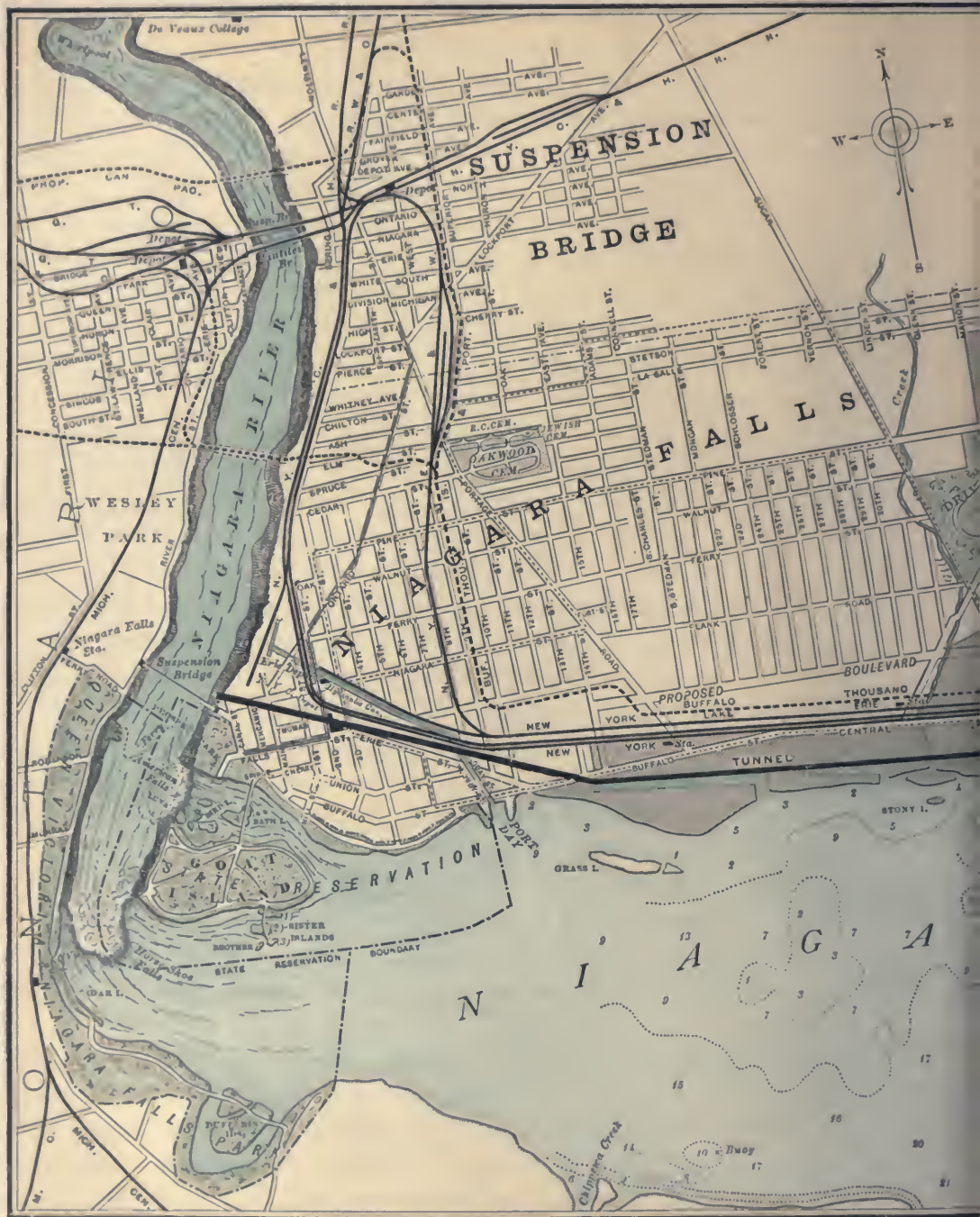
The Oneida Community, (limited), of Niagara Falls has established one of the largest silver plating works in the United States, and has also added an extensive steel chain manufactory to the establishment. The capacity of the works has been doubled since their establishment.

Carter & Company, (limited), manufacturers of counter check books, located at Niagara Falls when the goods were first introduced. The establishment has been enlarged several times, and a new building is now being erected, to meet the increased demand.

A third flouring mill, "The Central," has been established, with a capacity of 2,000 barrels per day. Schoellkopf & Matthews' Niagara Flouring Mill and The Central Flouring Mill, standing side by side at Niagara Falls, are the largest flouring mills east of Minneapolis, and are almost continually run to their full capacity.

The establishment of the flouring mills necessitated the building of large cooper shops. All the barrels used by the mills are manufactured in the mill district. This branch of industry gives employment to a large number of men.

The business of the Brush Electric Light & Power Company, organized in 1881, has continuously increased. It now furnishes light not only for Niagara

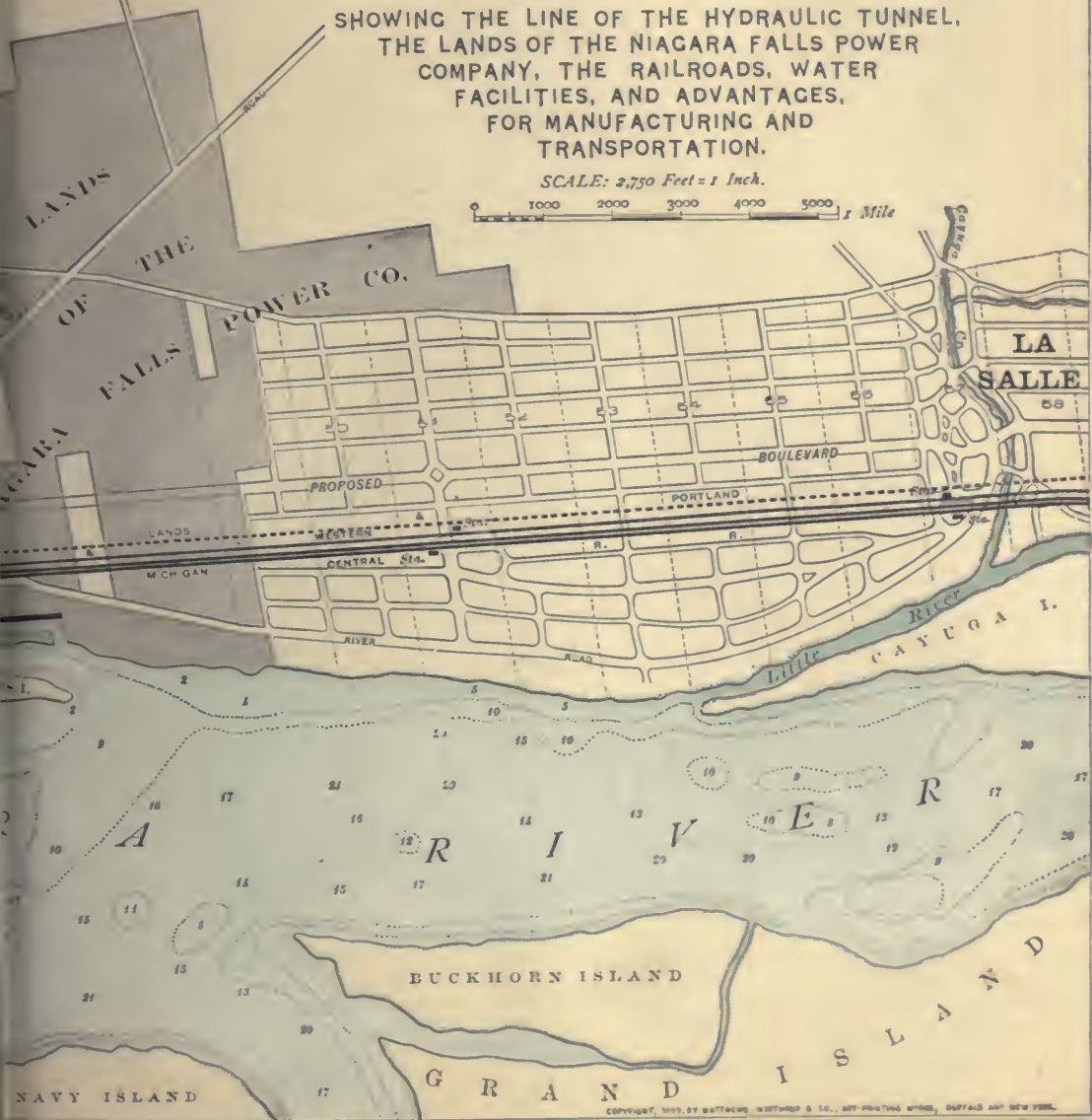


Niagara Falls AND VICINITY.

SHOWING THE LINE OF THE HYDRAULIC TUNNEL,
THE LANDS OF THE NIAGARA FALLS POWER
COMPANY, THE RAILROADS, WATER
FACILITIES, AND ADVANTAGES,
FOR MANUFACTURING AND
TRANSPORTATION.

SCALE: 2,750 Feet = 1 Inch.

1000 2000 3000 4000 5000 1 Mile



Falls, but for Suspension Bridge two miles distant. The wires of this Company also cross the Niagara River to Canada and light Niagara Falls, Ontario, making a circuit of several miles along the shore of the river on each side.

The Niagara Falls Brewing Company's establishment is one of the most successful and prosperous concerns of the kind in the country. Since the erection of the buildings, additions have been made sufficient to double its capacity.

The building of so many mills led to the erection of Philpott & Leupp's machine shop, an extensive establishment located in the heart of the mill district.

Every branch of business established during the past fifteen years has been obliged by increased demand to double its capacity.

A summary of the yearly transactions of some of the various branches of industry will illustrate the importance of Niagara Falls as a manufacturing center.

The flouring mills manufacture annually 942,000 barrels of flour, value, \$4,710,000; employ 110 men and pay out for wages \$66,000. The Paper and Pulp Mills turn out 9,156 tons, value, \$527,520; employ 126 persons, and pay out for wages \$64,680. The Cooper Shops employ 130 men, manufacture 603,600 barrels, value \$211,260, and pay out for wages \$64,800. The Oneida Community, limited, employ 220 persons and pay out for wages \$60,000; value of product, \$200,000. Carter & Company, limited, employ 161 persons, pay out in wages \$49,400; value of product, \$350,000. The Niagara Falls Brewing Company employ 40 men and pay out in wages \$28,000; manufactures 40,000 barrels, value \$280,000. Philpott & Leuppie employ 16 men, and pay \$9,600 for wages.

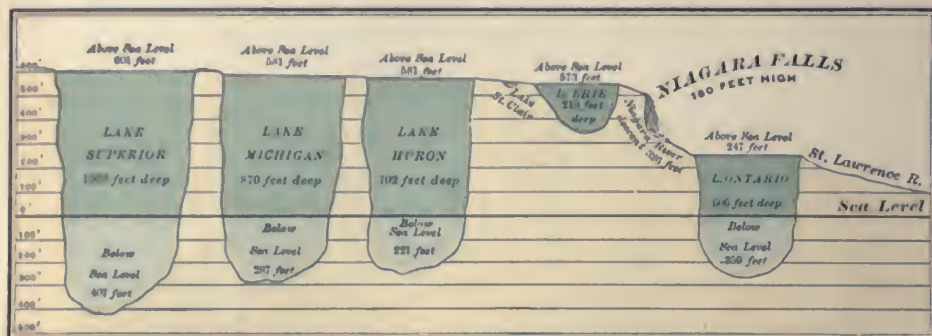
These establishments are among the most prosperous in the country, a fact largely due to the great superiority of the power and the unexcelled shipping facilities at their command.

The railroad companies have been watchful of the rapid growth of the manufacturing interests, and railroad sidings have been laid to every mill door. Twenty-seven thousand cars of mill freight are now handled every year.

The chain of the great lakes, the inexhaustible source of the power, shown in the illustration at page 16, is unaffected by floods or droughts, the



THE RAPIDS ABOVE THE FALLS.



LEVEL OF THE CHAIN OF GREAT LAKES.

surface height of the Niagara River is practically the same at all times, and the lake water which constitutes the stream is of the purest quality. There is nothing to interrupt the steady flow of the products of these establishments, and being located as they are upon the great highway of commerce between the East and West, where the trunk lines of railway concentrate at the International Railway Bridges, connecting the United States and Canada, shown in the illustration of the International Bridges at pages 30 and 37, the means of obtaining the raw material, and the facilities for bringing the products of the manufacturing establishments to the consumer, are unexcelled.

THE DEMAND FOR ADDITIONAL RELIABLE WATER-POWER.

The present need of additional reliable water-power has led to the construction of the Hydraulic Tunnel of the Niagara Falls Power Company, and the almost unlimited adaptation of the greatest water-power in the world to manufacturing purposes.

Water-power in America is gradually diminishing as the country becomes more thickly settled. At many places in the Eastern States it has become necessary to supplement water-power with steam in order to run machinery during the twenty-four hours, thereby greatly increasing the cost of production. Much of the water-power in use in various sections of the country has been developed by the construction of dams for the storage of water during the dry season. These devices have at times proved inadequate to supply the water required, and at other times when freshets pre-

vailed the dams have given way, entirely depriving the manufacturers of power.

The cost of maintaining dams, the unreliability of the power, and the isolated location of many establishments on slender lines of railroad, where from lack of competition, rates are high, place such manufacturers at great disadvantage with establishments like those located at Niagara, having the benefit of steady power and abundant shipping facilities.

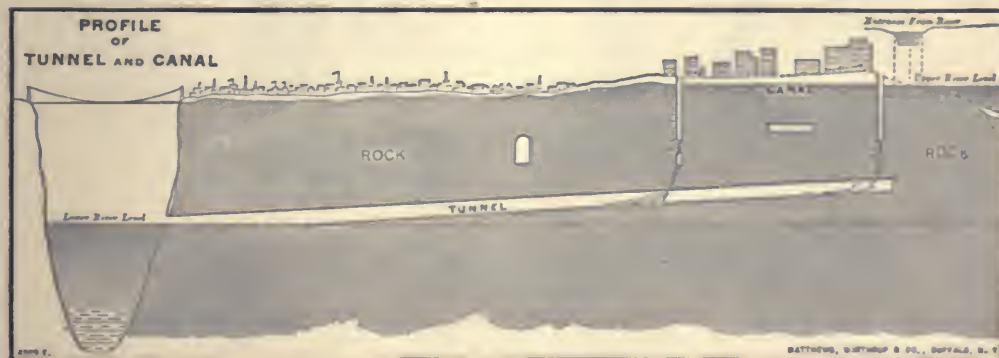
Niagara Falls, by means of the Hydraulic Canal, possessed advantages of power and shipping facilities greater than any other manufacturing center in the country, and as a consequence the manufacturing establishments increased rapidly until nearly every available horse-power was utilized and the demand for power, under circumstances offering so many advantages to the manufacturer, continued.

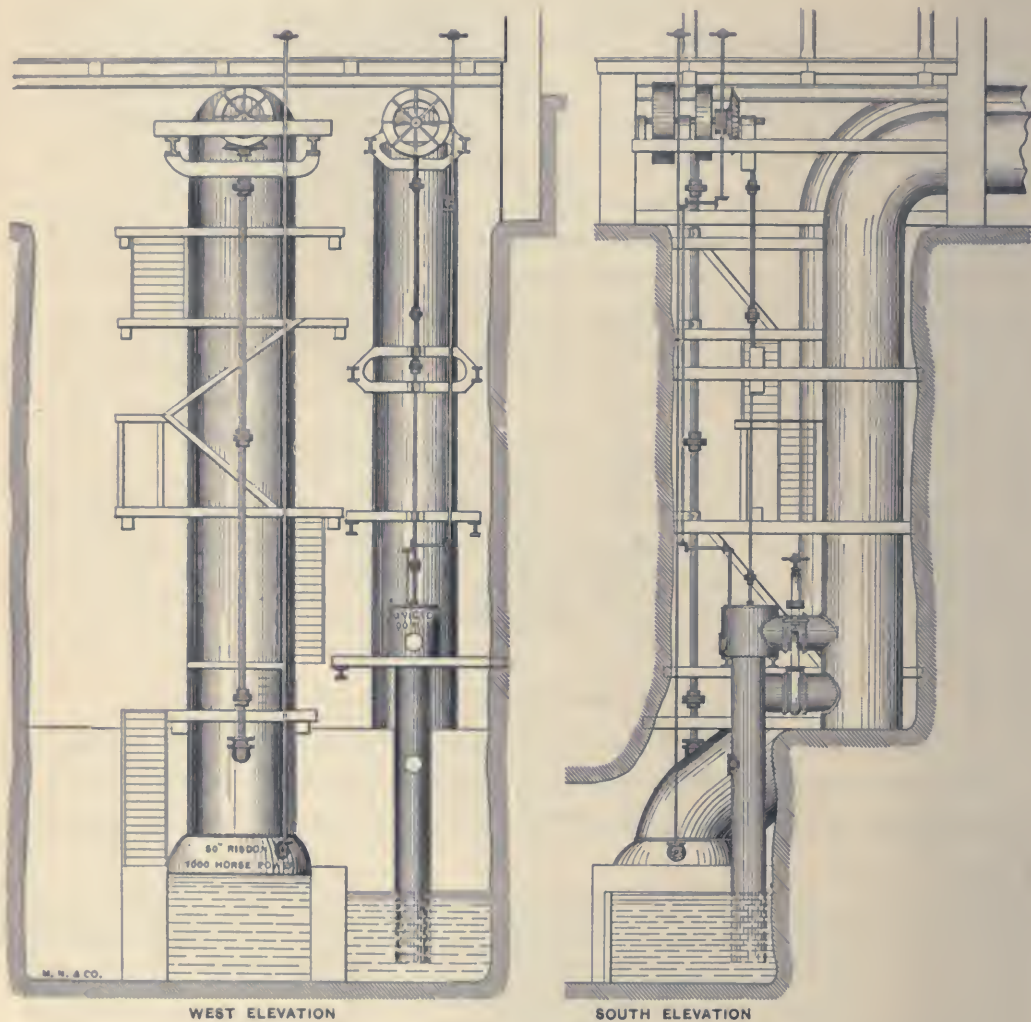
THE DEVELOPMENT OF ELECTRICAL SCIENCE.

The rapid development of electrical science also increased the demand for power, and convinced scientists and manufacturers that the time had come for a larger utilization of the enormous water-power of the Falls of Niagara than had hitherto been undertaken.

THE HYDRAULIC TUNNEL.

The idea of the Hydraulic Tunnel was conceived by the late Thomas Evershed, Division Engineer of the New York State Canals. It consists of a





PLAN SHOWING ARRANGEMENT OF WHEELS
IN THE WHEEL-PIT OF THE
NIAGARA FALLS HYDRAULIC POWER AND MANUFACTURING CO.
NIAGARA FALLS, N. Y.

subterranean tunnel, or tail race, extending from the surface of the water below the Falls to a point on the Niagara River above the Falls. It is connected with the river by means of short surface canals, wheel pits, and cross tunnels, as shown in the illustrations at pages 17 and 20. The power produced by the capacity of the Tunnel is equal to the water-power of Lawrence, Lowell, Holyoke, Turner's Falls, Manchester, Bellow's Falls, Lewiston, Cohoes, Oswego, Patterson, Augusta, Ga., Minneapolis, Rochester and Lockport combined.

The method of using the power is the same as that in operation upon the Hydraulic Canal, shown in the illustration of one of the stand pipes on the canal basin at page 18. While the principle is the same, there is a difference in the manner of obtaining the water. At the Hydraulic Canal there is one long surface canal, a canal basin or reservoir, wheel pits and short tail races, to the adjacent high bank of the river. In the case of the Hydraulic Tunnel, the Niagara River itself is the basin, or reservoir, directly connected by short surface canals, wheel pits, and cross tunnels, with one great tunnel, or tail race, nearly two miles in length, which carries the water from the wheels to the Niagara River below the Falls as shown in the illustration at page 17.

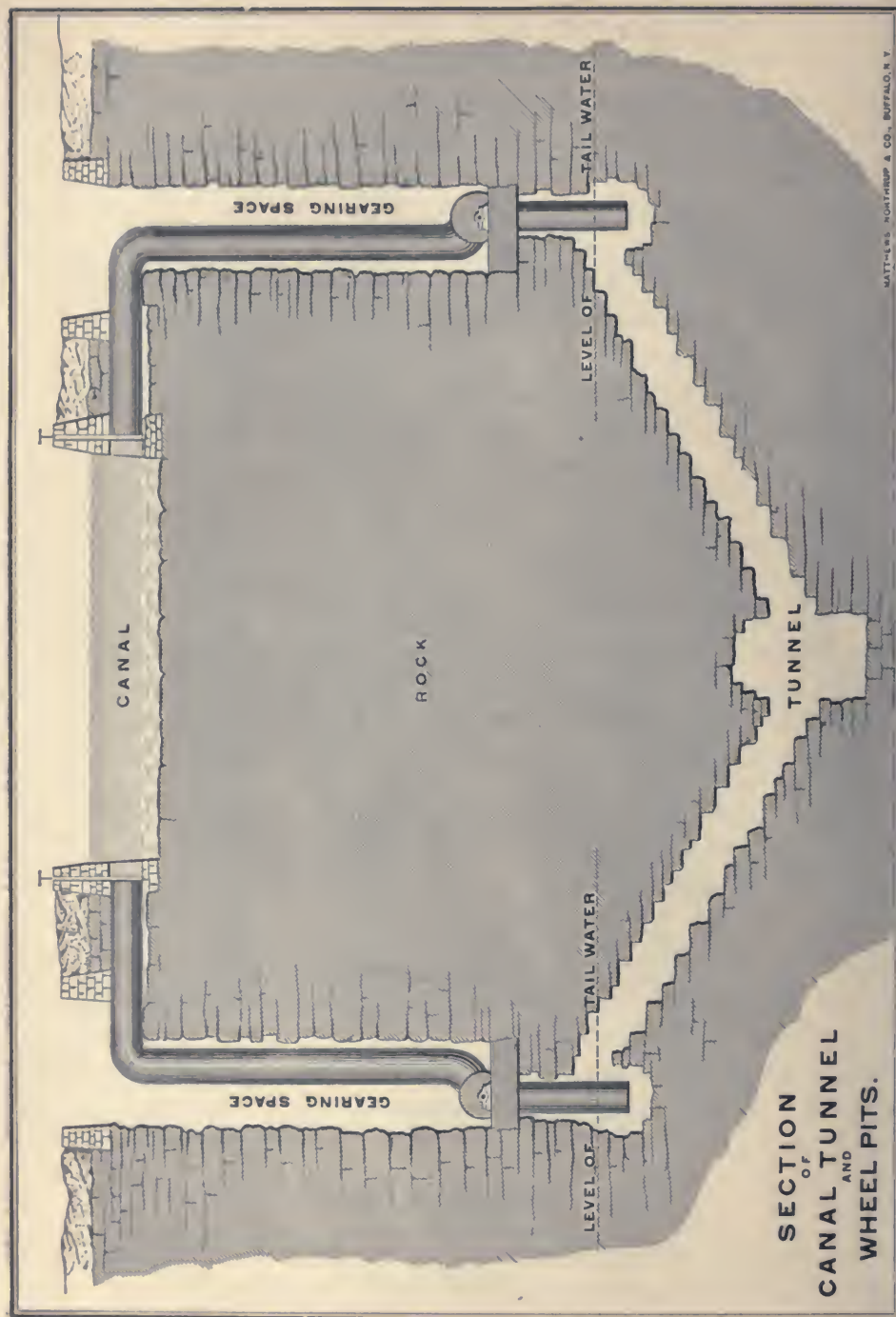
The great volume of the upper Niagara River, nearly three miles in width, and navigable in depth at the point of the water supply of the Hydraulic Tunnel, is shown in the illustration of the Niagara River from the tunnel lands, at pages 12 and 13.

THE NIAGARA FALLS POWER COMPANY.

The Niagara Falls Power Company was incorporated by a special act of the Legislature of the State of New York, March 31, 1886, for the purpose of constructing, maintaining and operating the Hydraulic Tunnel, and for furnishing power for manufacturing purposes.

MILL SITES.

The company has purchased lands extending two miles, along the shore of the Niagara River adjacent to the Hydraulic Tunnel, which have been laid



SECTION
OF
CANAL TUNNEL
AND
WHEEL PITS.

MATTESON, NORTHROP & CO., BUFFALO, N. Y.

out for lots, streets, mill races, wharves and railway sidings for the purpose of forming a town composed wholly of mills, factories and workshops.

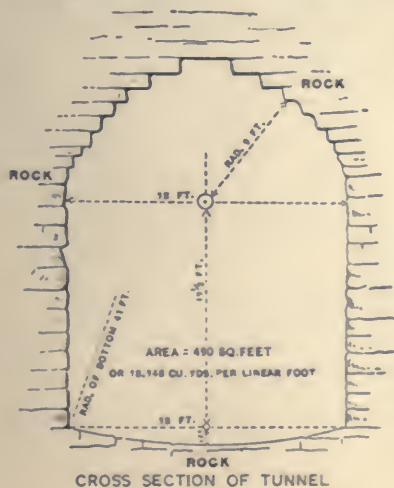
The company has also purchased an adjoining tract of one thousand acres, which has been laid out in streets and lots for homes for workmen employed.

The location of the mill sites and the new manufacturing district is shown upon the map of Niagara Falls and vicinity at pages 12 and 13.

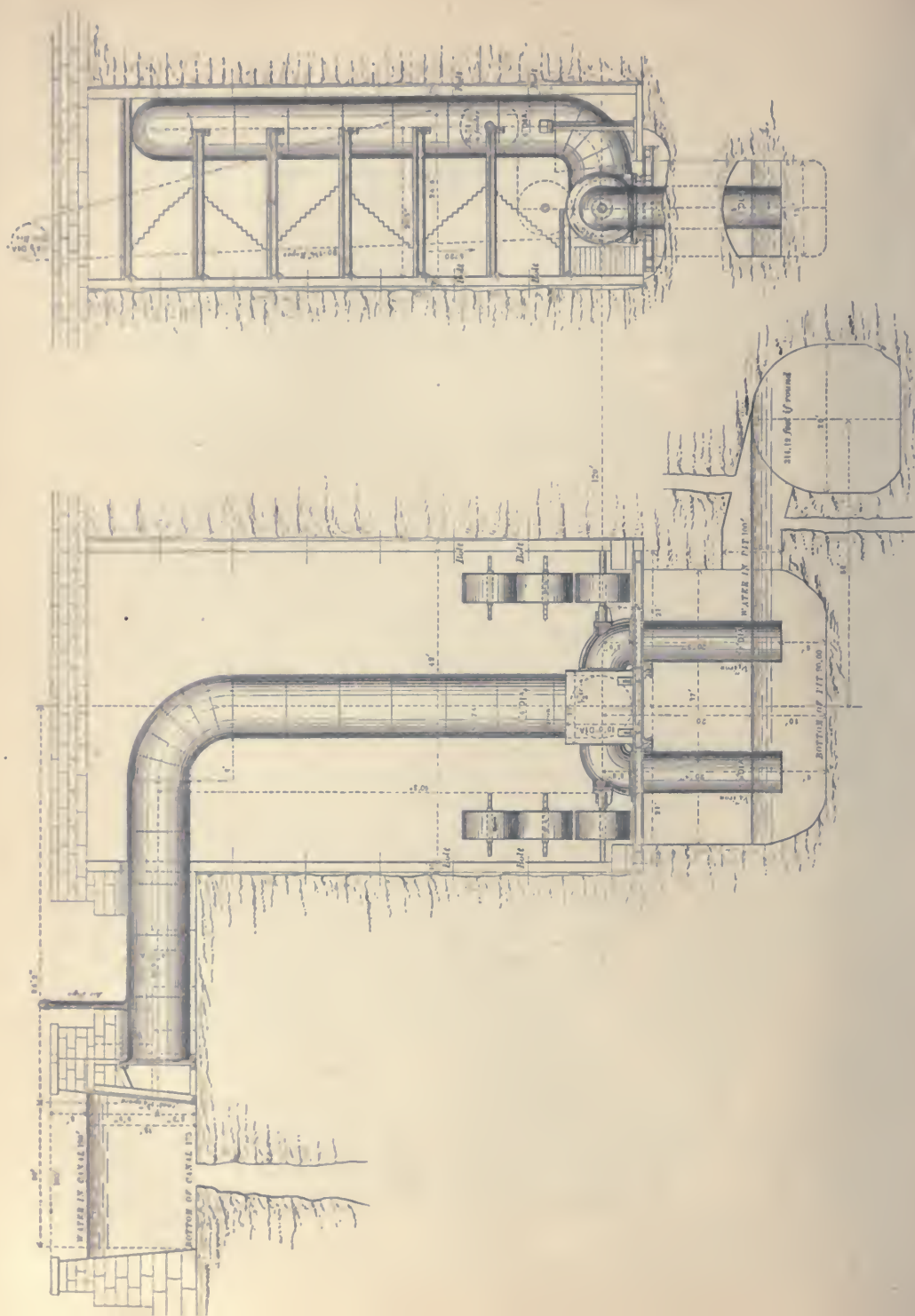
THE TUNNEL.—PLANS OF THE NIAGARA FALLS POWER COMPANY FOR THE UTILIZATION OF THE POWER OF THE FALLS OF NIAGARA.

The association of prominent business men at Niagara Falls, New York, known as The Niagara Falls Power Company, was organized for the further development of the water-power at Niagara, and has, from its charter and the amendatory acts, all the powers and grants necessary for taking water from the Niagara River, passing the water through the raceways and tunnels of the company, and furnishing the power derived from the energy of the water, to the mills and factories to be located upon the adjacent lands.

For this purpose, from the water level below the Falls, a subterranean tunnel will be constructed of horse-shoe shape, having capacity equal to a circle twenty-five feet in diameter, extending through the solid rock, to the



upper river at a point about one mile above the Falls. From this point the tunnel continues parallel with the shore of the river one and one-half miles, at an average depth of 160 feet below ground, and about 400 feet distant from the navigable waters of the river, with which it is connected by means of surface conduits or canals, through which the water from the river enters and is drawn through the shafts and wheel-pits into the great tunnel below, which forms an immense tail race for all of the mills, factories and workshops. A cross section view of the



PLAN TO DEVELOP 2,000 HORSE-POWER.

tunnel, showing its form is given, on page 21, and on page 20 a view showing the manner in which the tunnel will be constructed.

The plans adopted will develop 120,000 horse-power. For convenience of construction, the work will be divided into three sections.

The plan of the entire work is shown by illustration on pages 12 and 13, and that of the first section, upon which work is now begun, on page 17.

The raceways, canals, conduits and wheel-pits are cut through the hard and durable "Niagara" limestone, which gives to all absolute permanency, and the fact of the rock being but a few feet (at no point over ten feet) below the surface, enables the buildings and heavy machinery to be placed upon solid foundations.

The water falls upon turbine wheels, which will be put in by the company in a number of the pits, and the power developed thereby will be brought to the surface, from which point it will be delivered to the mills or factories at that point, or transmitted by cable, pneumatic tube, or electricity to adjacent lands as the customers may desire.

The company will also lease power to customers wishing to excavate their own wheel-pits and put in their own water wheels and connections. An illustration showing the manner in which the wheel-pits will be constructed, the wheels set, and the power brought to the surface is given at page 22.

The first cost of the power produced will be so small, that the rates of rental will be much below those of any other power in the country.

The company has purchased about 300 acres of land, beginning a short distance above the upper boundary line of the New York State Reservation at Niagara, and extending along the shore of the river for two miles, at an average depth of 600 feet back from the river, assuring to the company this entire length of river frontage with its facilities for dockage, and furnishing ample room for mill sites of any size desired. The land is shown on the map at pages 12 and 13.

There have also been purchased over 1,000 acres of land adjacent to that already described, which will be used for mill sites, and more particularly for homes for operatives, and will be offered at very reasonable rates, enabling the manufacturer to supply his employees with good and healthful homes for a very moderate sum.

All the lands will be furnished with a steady supply of pure water for all purposes, will be lighted in the most approved manner, have good streets, and be connected with the business portion of Niagara Falls and all adjacent points by means of the best street railway accommodations.

These lands are shown on the maps at pages 12 and 13.

A thorough and complete system of side tracks will be run to all the lands and mill sites, connecting them with the following great trunk lines of railroad: New York Central & Hudson River; New York, Lake Erie & Western; Delaware, Lackawanna & Western; West Shore; Grand Trunk; Rome, Watertown & Ogdensburg; Lehigh Valley; Western New York & Pennsylvania; Buffalo, Rochester & Pittsburg; Michigan Central Railroad; Lake Shore & Michigan Southern; and having also the water connections of the Niagara River, the great lakes and the Erie Canal.

The map of the railroads at Niagara Falls and vicinity at page 29, shows the desirability of this location from a shipper's point of view.

For the construction of this great work a contract has been made, and under it work has been commenced by the Cataract Construction Company upon the building of the tunnel, the shafts, raceways, and works to complete the undertaking.

THE CATARACT CONSTRUCTION COMPANY.

It is fortunate for the manufacturing interests of the country that this great enterprise is in the hands of men who have abundant capital to develop it to the fullest extent.

Among the stockholders of the Construction Company are: J. Pierpont Morgan, George S. Bowdoin and C. H. Coster of the banking house of Drexel, Morgan & Co.; Charles Lanier, Edward D. Adams and Edward Winslow of the firm of Winslow, Lanier & Co.; Brown Brothers & Co.; William K. Vanderbilt, D. O. Mills, H. McK. Twombly, Morris K. Jesup, August Belmont & Co., Isaac N. Seligman, Kuhn, Loeb & Co., A. J. Forbes-Leith, Charles F. Clark, Edward A. Wickes, Francis Lynde Stetson, F. W. Whitridge, all of New York City; George M. Porter, of Buffalo, and others.

The officers of the Company are: Edward D. Adams, president; Francis Lynde Stetson and Edward A. Wickes, vice-presidents; William B. Rankine, secretary, and George H. Kent, treasurer. The directors are Messrs. Mills, Lanier, Bowdoin, Clark, Whitridge, Forbes-Leith, and the President, Vice-Presidents and Secretary.

The engineers are Albert H. Porter, resident engineer; John Bogart, (N. Y. State Engineer) and Coleman Sellers, consulting engineers; and Clemens Herschel, hydraulic engineer.

These names vouch for the character and extent of the work to be performed.

In accordance with the contract, the first section of the work will be completed and the power ready for use by the first of January, 1892.

It will be economy for manufacturers who intend to locate at Niagara Falls and use the power to make contracts at an early date and begin the work of constructing their factories and mills, so as to be in readiness to use the power immediately upon its development.

An examination of the maps and illustrations of Niagara Falls, the adjacent country, the railroad connections and waterways with the plans of the Niagara Falls Power Company for the development of the water-power, will convince manufacturers and business men generally of the great resources and advantages of Niagara Falls for all kinds of manufacturing and milling industries.

TO MANUFACTURERS.

Success in manufacturing, which means remunerative returns upon the capital invested, is now based upon three important factors:

First—Location, with reference to the economical procurement of raw material.

Second—Cheap and continuous power.

Third—Proper transportation facilities for distribution of the manufactured articles at a cost which shall place the manufacturer in line with the most favored localities occupied by his competitors.

These conditions exist to the fullest extent at Niagara Falls. The power is particularly good. The great lakes form a chain of reservoirs



THE FALLS OF NIAGARA FROM CANADA SIDE.

which cannot cease to supply a continuous power, steady, ample in volume, and not excelled by any upon this continent. Wheel-pits, conduits and connections are cut through the solid rock, insuring stability, permanency and a minimum cost for maintenance. Those familiar with water-power will fully appreciate the great advantages which come to the manufacturer, when he can rely upon ample power, with enduring foundations for buildings and machinery. Freed from all apprehension of drouth or freshets, which might affect his power, with no dams to break or reservoirs to watch, the manufacturer can expend his utmost energy pushing and placing his product, knowing that his motors will always respond to the needs of his business.

The Great Trunk Lines centering at Niagara Falls, together with lake and Erie Canal transportation, afford means for obtaining the raw material at the lowest rates. The grain producing States of Ohio, Indiana, Illinois, Minnesota, Dakota, Michigan, Iowa, and Missouri border upon the chain of lakes or are pierced by the trunk lines of railway which pass the doors of the mills at Niagara Falls and bring supplies of wheat and other cereals for milling uses. More than two-thirds of all grain exported from the United States is shipped eastward by the lake route, canal, or over the great railway lines, extending from Chicago to New York — passing over the Niagara River. Where is there a better location for milling than Niagara Falls?

The forests of Michigan and Wisconsin yield abundant supplies of lumber, which is brought down the lakes and into the Niagara River for distribution eastward.

This trade has assumed large proportions during the past few years, and exceeds that of any other locality in this country.

The ores of the Lake Superior region, which are practically inexhaustible, may be brought to Niagara Falls for smelting and refining. Vessels laden at the mines can pass down the lakes and the Niagara River and unload their cargoes upon the docks of the Power Company, there to undergo the processes which precede their entrance into articles of commerce.

Niagara Falls is about midway between New York and Chicago. Railroad rates east and west are based practically upon one-half of the through

tariff. Local rates over all the lines centering at Niagara Falls are reasonable, and are kept so through the competition arising from the presence of the various trunk lines running east and west. As a distributing point Niagara Falls is highly favored and must improve with increased shipments.

Among the industries which may be profitably located at Niagara Falls are: Flour mills, paper mills, pulp mills, sulphite mills, wood and metal working industries, manufacture of cotton and woolen fabrics, manufacture of machinery specialties, manufacture of electrical machinery and supplies, wire works, paper-box factories, rope factories, foundries, smelting and blast furnaces, treatment of metals by electricity, storage and shipment of electricity.

To summarize the advantages of Niagara Falls as a manufacturing point, it has cheap and enduring power, unexcelled transportation facilities, both rail and water, access to all the great States producing raw material, numerous competing lines of railway, lake and Erie Canal for distribution of manufactured products, cheap lands for homes for operatives, excellent schools, low rate of taxation, and ample banking facilities.

SHIPPING AND RAILWAY FACILITIES.

Niagara Falls is undoubtedly destined in the near future to be classed as one of the great railway centers. Seven great trunk lines are already in active operation making connections with promptness and dispatch.

The tracks of the New York Central, West Shore, Erie, Grand Trunk, Rome, Watertown & Ogdensburg, Lehigh Valley and Michigan Central railways adjoin and run parallel with the tunnel lands and the entire plot of mill sites of the Niagara Falls Power Company, with provision for sidings to each mill site.

A proper consideration of these advantages will convince the manufacturer that the facilities afforded for transportation have no equal in this country.

To the seaboard and all points east and west, freight rates are now made by the railroads from Niagara Falls upon the basis of about one-half the through competitive rates from Chicago and other western points to the east.



This places the manufacturer in a position to compete successfully with manufacturers of any locality in the United States.

The mill sites are located upon the Niagara River at a point above the Falls, navigable for vessels. Canal boats can also receive and discharge freight at the mills, as the Niagara River connects with the Erie Canal at Tonawanda, eleven miles distant. Direct shipment of freight destined for Lake Ontario ports can be made with the Rome, Watertown & Ogdensburg Railroad, New York Central & Hudson River Railroad, and Niagara Navigation Company.

Surveys have been made by other railway corporations with the intention of extending their systems to Niagara Falls and vicinity. The numerous freight yards are at the present time very extensive, acres of ground being covered with net-works of tracks.

Niagara Falls, owing to its close proximity to the Dominion of Canada, offers unusual advantages as a distributing point. Hundreds of thousands of tons of freight are brought to Niagara daily to be shipped to all parts of the world. The great Cantilever and the railway Suspension bridges present daily scenes of constant activity in the departments of the railroad, express, freight



RAILWAY CANTILEVER BRIDGE AT NIAGARA.



HORSE-SHOE FALLS FROM GOAT ISLAND.



MAP OF THE FALLS OF NIAGARA.

and telegraph interests. There is scarcely a moment all through the day during which cars are not crossing and re-crossing the bridges. With the development of the great Tunnel it is safe to predict that every railway of importance in this State will have tracks, yards and depots at Niagara Falls and vicinity.

Equal advantages are offered for the commerce of the lakes by means of the Niagara River. An appropriation has been made by the United States government for the further improvement of the Niagara River above the Falls which will materially hasten the actual existence of the cheapest as well as the most available water-way in the world. Upon the completion of this channel, vessels can come down the Niagara River with their loads of lumber, grain, coal, ore, etc., to be unloaded upon the wharves and docks of mills and factories. They will have a continuous passage from the cities of the west and the great chain of lakes direct to Niagara Falls. Grain will be unloaded at the mills and manufactured in transit. Wheat can be shipped from any field in America without delay of transfers, manufactured into flour and taken directly to its destination. As a railway and shipping point, Niagara Falls is destined to be unexcelled. The value of imports of merchandise into the Niagara District from Quebec, Ontario, Manitoba and northwest territory alone was \$4,455,772 for the fiscal year ending June 30, 1889. This is the largest valuation, with two exceptions, shown by any of the northern border and lake ports. In the in-transit and trans-shipment trade where extraordinary dispatch is required, Niagara ranks sixth as compared with the twenty-four principal customs districts. There are but three lake ports that show as large an amount of American and foreign tonnage entered and cleared in 1889, as the Niagara District.

HOMES AND INVESTMENTS AT NIAGARA FALLS.

It is not necessary to speak of Niagara as a pleasure resort, its prominence in that respect is well known. From the utilization of the water-power, Niagara Falls now offers many advantages to persons desiring homes, capital seeking investment, and labor looking for employment.

Having in the town a population of over ten thousand, the Holly system of water-works, unsurpassed facilities for sewerage, gas and electric

light, telephone and telegraph connections, free postal delivery, three Banks, three newspapers, two union schools, primary schools, and many private and parochial schools, twelve churches, comprising all the principal denominations; an opera house, and many celebrated hotels, indispensable to a great pleasure resort; street railroads, the trunk lines of railway, and the great manufacturing establishments before mentioned, there is probably no place in the country more desirable for a home or offering greater inducements for investment of capital in lands and manufacturing than Niagara Falls.



FAC-SIMILE OF THE FIRST ENGRAVING OF THE FALLS OF NIAGARA.

From Hennepin's "New Discovery" published in 1697.

Situated on high ground on the shore of the Niagara River, twenty-one miles from Lake Erie, and fourteen miles from Lake Ontario, the atmosphere is invigorating and healthful. The State of New York, in the year 1885, purchased Goat Island and the smaller islands at the brink of the Falls, Prospect Park, and the river shore along the rapids, and opened them free forever to the public as the State Reservation at Niagara. The grounds about the Falls are now cared for and maintained at the expense of the State, and are visited by five hundred thousand people every year.



FALLS OF NIAGARA FROM PROSPECT POINT.

The establishment of the State reservation has increased the attractions of Niagara Falls and made it one of the most pleasant places of residence in the world.

THE STATE RESERVATION AT NIAGARA.

The Falls of Niagara, spelled "Ongiara," were indicated on Champlain's map in 1632, and on Sanson's map of Canada published in Paris in 1657.

On the sixth day of December, 1678, a vessel fitted out by the French explorer, La Salle, at Frontenac, now Kingston, Ontario, entered the mouth of the Niagara River from Lake Ontario, and the history of the Niagara region may be said to date from that event.

The crew of the vessel were sixteen in number, commanded by the *Sieur de la Motte*, and included *Henri de Tonty*, the assistant of La Salle in his wonderful explorations, and *Father Louis Hennepin*, whose name has become familiarly connected with Niagara, as that of the first white man who visited and described the great cataract.

Great changes have taken place in the contour of the Falls since *Hennepin's* view at page 34 was taken.

The Lateral Fall, shown in the illustration, has entirely disappeared. Table Rock probably formed the bed of the Lateral Fall. Large portions of Table Rock fell in 1818, 1828, 1850, and 1886. The fragments are visible, scattered upon the slope on the Canadian side.

Considering the recession of the Falls and other changes which have occurred during the two hundred years that have elapsed since *Hennepin* first beheld them, the illustration is, in some respects, quite an accurate outline of the Falls and vicinity to-day, as shown by the illustration at page 35.

The French built Fort Niagara at the mouth of the river, and established trading posts at Lewiston, seven miles below the Falls; at Fort du Portage, at the head of the rapids just above the Falls, and held dominion over the Niagara region until their surrender of Fort Niagara to Sir William Johnson, Commander of the British Forces in 1759.

After the close of the Revolutionary war, by the treaty of 1783, the great lakes and the Niagara River became the boundary between the United

States and Canada, but Fort Niagara was not evacuated by the British until 1796.

In the year 1805 the State of New York offered the lands along the Niagara River for sale, and large tracts were purchased by Augustus Porter and Peter B. Porter. The first settlement in the neighborhood of the Falls was destroyed by the British and Indians during the war of 1812.

In 1816 Augustus Porter purchased Goat Island and the adjacent Islands from the State, and erected the first bridge from the main shore to a point near the head of the island.

For 70 years Augustus Porter, Peter B. Porter, and their descendants guarded Goat Island from encroachment, saved the primeval forest upon it from the plow and the axe, preserving that charming spot to this day substantially as nature left it. For this service they deserve to be held in grateful memory by every lover of the beauty of the natural scenery of Niagara.



RAILWAY SUSPENSION BRIDGE AT NIAGARA.

After the construction of the raceways along the rapids, Niagara Falls became a manufacturing place as well as a great pleasure resort.

The railroads were built at Niagara in 1836. The International Railway Suspension Bridge, one of the greatest achievements of engineering science, was built in 1855, and Niagara Falls at once became a great railroad center, and the channel of communication between the lakes and the ocean. The great Cantilever Railway Bridge was built in 1883. No other bridge ever having been completed upon the same principle it attracted the attention of the scientific world by its beauty, strength and safety. It is an object of curiosity to visitors from all parts of the world, and divides with the railway suspension bridge the traffic of the great railway lines centering at Niagara.

The upper or new suspension bridge was built in 1869, and constituted at the time the longest single span in the world.

The water-power upon the Hydraulic Canal was first utilized in 1875, and was found to be superior to the water-power on the raceways and Bath Island, and had the further advantage of abundant railroad facilities, and was located so far from the cataract as not in any manner to deface the natural scenery of the Falls.

The disfigurement of the natural scenery of the cataract by encroachments for manufacturing purposes had already become a matter of discussion in the public press.

In the year 1869 the necessity of taking some measure to preserve the beauty of the natural scenery from destruction was discussed by Frederic S. Church, the artist, Frederick Law Olmsted, Hon. William Dorsheimer, Richardson, the architect, and many others, but no action was taken until several years afterward, when, at the suggestion of Mr. Church, Mr. William H. Hurlburt communicated with the Earl of Dufferin, then Governor-General of Canada, in relation to the establishment of an International Park on both sides of the Falls.

The first practical step taken in the matter of the establishment of the State Reservation at Niagara was embodied in a message from Governor Robinson to the Legislature of the State of New York, Jan. 9, 1879, in which he



THE WHIRLPOOL

advocated the desirability of the project, and referred to a conversation with Lord Dufferin, who suggested the propriety of steps being taken by the State of New York and the Dominion of Canada to preserve the natural scenery of Niagara from destruction. At the suggestion of Governor Robinson the matter was referred to the Commissioners of the State Survey, who recommended the extinguishment of the private title in so much land as should be regarded as absolutely necessary for the purpose, and that the State should, by purchase, acquire a title to such land, and hold it in trust for her people forever.

Bills to carry out this recommendation were introduced in the Legislatures of the State of New York of 1880 and 1881, but failed to secure passage. No legislative action was taken in 1882. On the 30th of January, 1883, a bill was introduced entitled "An Act to authorize the selection, location and appropriation of certain lands in the Village of Niagara Falls for a State Reservation, and to preserve the scenery of the Falls of Niagara." The bill was passed, and on the 30th of April, 1883, received the approval of Governor Cleveland, and became a law. William Dorsheimer, Andrew H. Green, J. Hampden Robb, Sherman S. Rogers, and Martin B. Anderson were appointed commissioners to select the necessary lands, and the Reservation was located by the selection of some 107 acres in the immediate vicinity of the Falls, the property taken embracing all of Goat Island and the adjacent islands, Prospect Park, from the brink of the cataract to the new Suspension Bridge, also a strip of land running from Prospect Park to Port Day, bordering the Niagara River and containing the buildings which marred the beauty of the natural scenery. Mathew Hale, Luther R. Marsh, and Pascal P. Pratt were chosen to act as appraisers of the property, and made awards amounting to \$1,433,429.50.

The Legislature of 1885 passed an Act making the necessary appropriation, and on the 30th of April of that year Governor Hill gave his approval to the enactment, which gave Niagara to the people of the State and the world for all time to come. The State Reservation at Niagara was opened to the public with imposing ceremonies July 15, 1885.

Since the establishment of the Reservation the buildings upon Bath Island and on the strip of land from Prospect Park to Port Day have been



removed, leaving the view of the rapids and Islands and the surroundings of the great cataract unobstructed. A plan for the restoration of the natural scenery has been prepared, and "as soon as the hand of nature, nowhere more powerful than in this favored place, can do the work these banks will be covered with trees, these slopes made verdant, and the cataract once more clothed with the charms that nature gave it."

HISTORIC POINTS.

From the State Reservation many historical points on the Niagara frontier are visible. At the mouth of Cayuga Creek, five miles above the Falls on the American side, La Salle, in 1679, built and launched the "Griffin," the first vessel that sailed the upper lakes. Further down, at the "Old French Landing" within the Reservation, La Salle and Father Hennepin and their followers embarked after the portage of their canoe from Lewiston. The landing was used by the early French and British traders, and before their coming, by the Indians of the Neutral Nation and their successors, the Senecas. About a mile above the Falls is the site of the French Fort du Portage, destroyed by Joncaire before his retreat in 1759. The old stone chimney of the French barracks is yet standing, and the outlines of Fort Schlosser built by the British in 1761 are visible. December 29, 1837, during the "Patriot Rebellion" the steamer Caroline was seized at Schlosser landing, about two miles above the Falls, towed out into the river and allowed to drift with the current over the Falls.

On the opposite shore of the river is the Canadian Village of Chippewa, the site of the battle of Chippewa, July 5, 1814. On the height, on the Canada side west of the Horse-Shoe Fall, the battle of Lundy's Lane took place July 25, 1814, and further down the river the lofty shaft of Brock's Monument marks the battle ground of Queenston Heights, October 13, 1813.

THE QUEEN VICTORIA NIAGARA FALLS PARK.

Following the example of the State of New York, in the year 1885 the Legislature of the Province of Ontario, Canada, passed an Act providing for



the appointment of the Commissioners of the Niagara Falls Park. C. S. Gzowski, J. W. Langmuir, and J. G. Macdonald were appointed Commissioners. A strip of land was selected, 154 acres in area, extending from a point below the Falls to the head of the rapids, a distance of about two miles. Awards were made to the amount of \$436,813.24. The Queen Victoria Niagara Falls Park on the Canadian side was opened to the public May 24, 1888.

Undesirable buildings upon the cliff have been removed, walks and drives provided, and the Falls upon the Canadian side are now environed by one of the most beautiful natural parks on the continent.

The location and extent of the State Reservation at Niagara and the Queen Victoria Niagara Falls Park are shown upon the map of the State Reservation at page 41.

What nature has done for Niagara has thus been wisely supplemented by the action of two great nations. When we consider the advantages for free enjoyment of the grandeur and beauty of the scenery of the great cataract, and the opportunities for material development and prosperity afforded by the utilization of the vast water-power at Niagara, it must be conceded that it would be difficult to find a more favored locality. Above the State Reservation the shore of the river is dotted with villages and pleasant homes as far as Tonawanda and Buffalo. In the river, Navy, Buckhorn, and Grand Islands are convenient resorts for pleasure or private residence. Below the State Reservation are the Whirlpool Rapids, the Whirlpool itself, and the wonderful gorge to Lewiston, where the beautiful lower Niagara River, bordered on either side by suburban residences, flows into Lake Ontario.

The close proximity of Buffalo, Tonawanda and Niagara Falls has already united them by many local ties, and identified them in a variety of business enterprises. The prosperous and rapidly extending communities of Niagara Falls and Suspension Bridge are practically one place, and steps have been taken for uniting them under one municipal government. It is manifest to the student of this historic and beautiful locality, that by reason of the establishment of the State Reservation upon the borders of the great cataract, the utilization of the vast water-power along the upper Niagara River by means of the hydraulic tunnel, and the concentration of



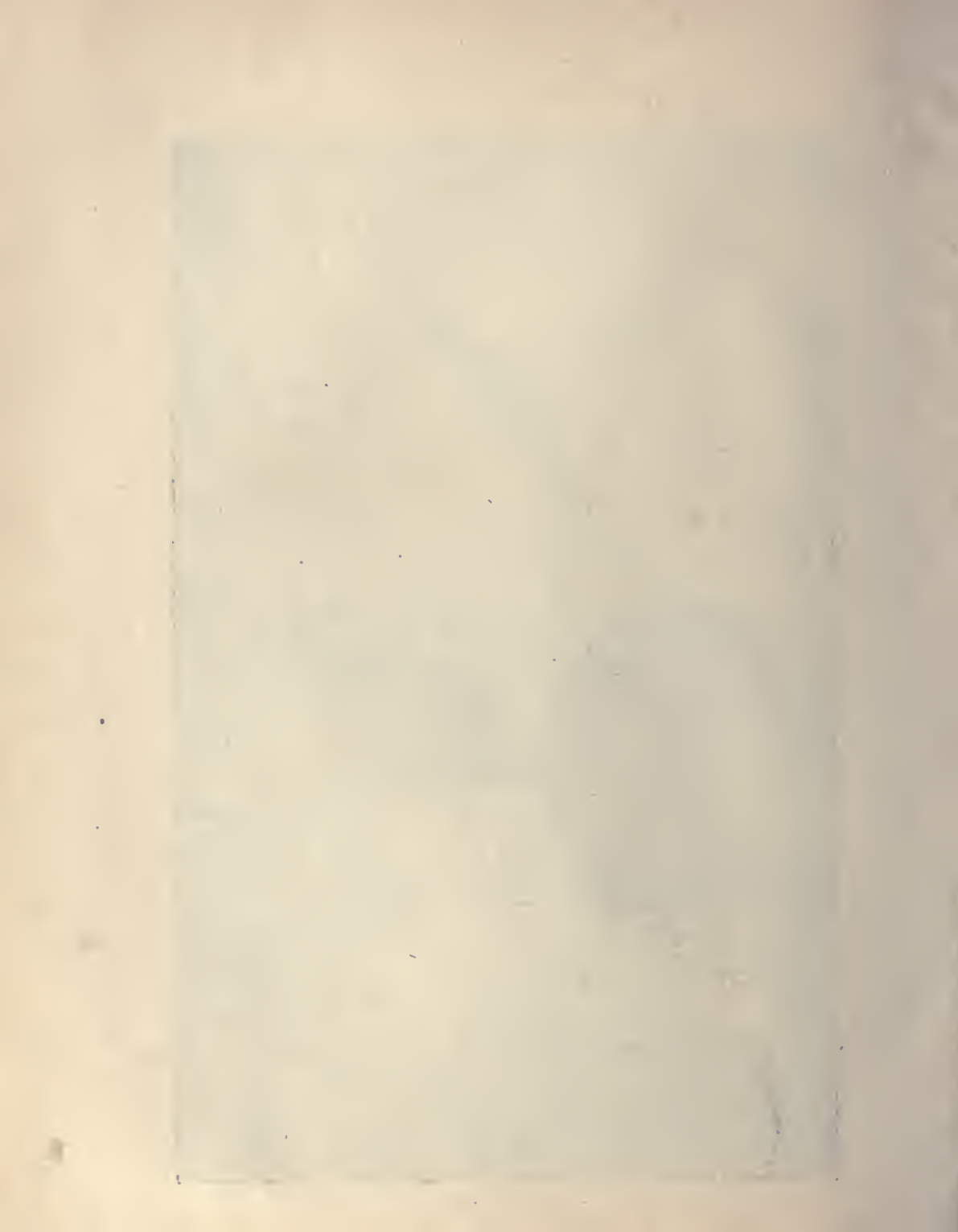
THE WHIRLPOOL RAPIDS.

the great railway lines at Niagara, the growth of Niagara Falls as a pleasure resort and a manufacturing place is sure to be rapid and constant until it becomes one of the largest and fairest cities of our country.





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