

UC-NRLF



\$B 41 795

*The Falls of
Niagara.*

YC 28368

"AMERICAN PLAN"

SINE UNEXCELLED."



LIBRARY
OF THE
UNIVERSITY OF CALIFORNIA.

GIFT OF
GEORGE MOREY RICHARDSON.

Received, August, 1898.

Accession No. 73250 Class No.

te the M.C.R.R.
essenger Depot.

James R. Hayes

*McAlister, Northrup
& Co. Buffalo, N.Y.*

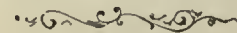


DETROIT, MICH.

CONVENIENT TO ALL BUSINESS CENTERS
AND PLACES OF AMUSEMENTS.

BAGGAGE TRANSFERRED FREE OF CHARGE.

RATES \$2, \$2⁵⁰ \$3⁰⁰ \$3⁵⁰ PER DAY.



OF THE
UNIVERSITY
OF CALIFORNIA



THE
INTERNATIONAL

THE "INTERNATIONAL" IS THE GREAT
SUMMER HOTEL AT NIAGARA FALLS.

IT IS OPEN FROM JUNE TO OCTOBER, IS KEPT ON BOTH THE EUROPEAN AND
AMERICAN PLANS. THE HOTEL FACES THE NEW PARK, AND ITS LAWN LEADS
DIRECTLY TO THE RAPIDS. THE HOTEL IS ENTIRELY OF STONE, FOUR STORIES
HIGH, WITH MAGNIFICENT COLORRADES, AND ONE OF THE FINEST LAWNS IN THE
WORLD. ALL COOKING IS DONE IN A BUILDING ENTIRELY DISTINCT FROM THE
HOTEL, SO THAT THE ODOR OF COOKING FOOD IS ENTIRELY ABSENT. MANY
FAMILIES REMAIN DURING THE ENTIRE SUMMER AT THE INTERNATIONAL, AND SPECIAL
LOW RATES ARE MADE TO FAMILIES REMAINING SEVERAL WEEKS. WRITE FOR TERMS,
EYE., TO INTERNATIONAL HOTEL, NIAGARA FALLS, N. Y.

THE TRAVELER WILL FIND OPEN AT ALL SEASONS OF THE YEAR THE "SPENCER
HOUSE," A COZY, HOME-LIKE HOUSE, COMBINING ELEGANCE, QUIET, COMFORT
AND CONVENIENCE. CHARLES DICKENS HAS PRAISED ITS TABLE; WILKIE COLLINS ITS BEDS
AND FINE LINEN; BOOTH DECLARES IT HIS FAVORITE HOTEL; MODJESRA, BARTHOLOI,
ANTHONY TROLLOPE, HON. CHAUNCEY DEPEW, AND SCORES OF OTHER DISTINGUISHED
GUESTS HAVE ENJOYED ITS HOSPITALITIES. IT IS SITUATED ON THE AMERICAN SIDE,
ACROSS THE STREET FROM THE CENTRAL DEPOT, AND TWO BLOCKS FROM THE GREAT FALLS.
IT IS KEPT ON BOTH THE AMERICAN AND EUROPEAN PLANS, WITH PRICES MODERATE AND
UNIFORM. A BEAUTIFUL GUIDE BOOK, EQUAL TO THIS VOLUME, IS PRESENTED FREE TO
PARTIES WRITING FOR IT. ADDRESS SPENCER HOUSE, NIAGARA FALLS, NEW YORK.

HOTELS AT NIAGARA FALLS, N.Y.

SPENCER
HOUSE



M. W. C.

THE LEADING
FIRST CLASS
COMMERCIAL HOTEL
— IN —
BUFFALO



THE GENESEE.

ACCOMMODATION

FOR 300

GUESTS.

It is the finest
location of any
Hotel in Buffalo
and is comparatively
fireproof, it has the
finest Billiard Room
of any Hotel in the
Country. Bus at
every train, take at
street car at the Depot
and it will land you
at the Genesee.

Frank A. Rogers.
PROPRIETOR.

Directly in front of Queen Victoria Park.
Its superior situation over other
Hotels at Niagara is Acknowledged by all.

THE

CLIFTON HOUSE



THE CLIFTON IS POSITIVELY THE ONLY HOTEL FROM THE APARTMENTS AND DINING ROOMS OF WHICH THERE IS A FULL AND UNOBSTRUCTED VIEW OF THE HORSESHOE AND AMERICAN FALLS, INCLUDING THE GRAND VIEW OF THE CANYON OF THE NIAGARA RIVER, FROM THE TEN HUNDRED AND FIFTY FEET OF COVERED PIAZZAS THE VIEW IS BEYOND DESCRIPTION, AND IS AN EXCLUSIVE ADVANTAGE OF THE CLIFTON. THE CLIFTON HOUSE IS CELEBRATED FOR ITS QUIET ELEGANCE AND FEATURES OF COMFORT AND CONVENIENCE. THE APARTMENTS, EN SUITE, OR SINGLE, ARE ATTRACTIVE IN APPOINTMENTS, AND THE CUISINE SERVICE AND ATTENDANCE SUPERIOR IN ALL RESPECTS.

NIAGARA FALLS

Address, Geo. M. Colburn.

NIAGARA FALLS, N. Y.

CAST-STEEL WORKS

of FRIED. KRUPP.

ESSEN, GERMANY.

REPRESENTED

BY THOMAS

PROSSER

& SON

LOCOMOTIVE TIRES. STEEL TIRED
CRANK PINS, WHEELS,
AND STEEL SHAFTS.

STEEL FORGINGS

Up to
50
TONS

THESE WORKS cover an area of 1200 acres, employ about 18,000 men, have the most improved plant, and stand unique, from the fact that they have their own Ore and Coal Mines, Blast Furnaces, etc., and that every stage of manufacture is under their own supervision, and are not (like others) dependent on the open market for a miscellaneous assortment of crude material, which, in connection with 75 years' experience, enables them to turn out a product of a very superior quality, second to none, and at the same time the different grades of Steel are always of the same uniform quality.

AMERICAN

OFFICE

15 GOLD ST.

NEW YORK

Steel of every description
Forged, Rolled, &c., into any Form or Article desired

THE FALLS OF NIAGARA

DEPICTED BY PEN AND CAMERA



MATTHEWS, NORTHRUP & CO.

BUFFALO AND NEW YORK.

1
.NGF2



THE RAPIDS ABOVE THE AMERICAN FALL, AND THE BRIDGE TO SISTER ISLANDS.

The American Rapids.

THE Rapids are far from being the least interesting feature of Niagara. There is a violence and a power in their foaming career, which is seen in no phenomenon of the same class. Standing on the bridge which connects Goat Island with the Main, and looking up towards Lake Erie, the leaping crests of the rapids form the horizon, and it seems like a battle-charge of tempestuous waves animated and infuriated against the sky.

No one who has not seen this spectacle of turbulent grandeur can conceive with what force the swift and overwhelming waters are flung upwards. The rocks, whose soaring points show above the surface, seem tormented with some supernatural agony, and fling off the wild and hurried waters, as if with the force of a giant's arm. Nearer the plunge of the Fall, the Rapids become still more agitated; and it is almost impossible for the spectator to rid himself of the idea that they are conscious of the abyss to which they are hurrying, and struggle back in the very extremity of horror.

This propensity to invest Niagara with a soul and human feelings is a common effect upon the minds of visitors, in every part of its wonderful phenomena. The torture of the Rapids, the clinging curves with which they embrace the small rocky islands that live amid the surge, the sudden calmness at the brow of the cataract, and the infernal writhe and whiteness with which they re-appear, powerless from the depths of the abyss, all seem, to the excited imagination of the gazer, like the natural effects of impending ruin, desperate resolution, and fearful agony, on the minds and frames of mortals.—*Nathaniel Parker Willis.*

Niagara Falls.

OF all the sights on this earth of ours which tourists travel to see,—at least of all those which I have seen,—I am inclined to give the palm to the Falls of Niagara. In the catalogue of such sights, I intend to include all buildings, pictures, statues, and wonders of art made by men's hands, and also all beauties of nature prepared by the Creator for the delight of His creatures. This is a long word; but, as far as my taste and judgment go, it is justified. I know no other one thing so beautiful, so glorious, and so powerful. I would not say that a traveler wishing to do the best with his time, should first of all places seek Niagara. In visiting Florence, he may learn almost all that modern art can teach. At Rome, he will be brought to understand the cold hearts, correct eyes, and cruel ambition of the old Latin race. In Switzerland, he will surround himself with a flood of grandeur and loveliness, and fill himself, if he be capable of such filling, with a flood of romance. The tropics will unfold to him all that vegetation in its greatest richness can produce. In Paris, he will find the supreme of polish, the *ne plus ultra* of varnish, according to the world's capability of varnishing; and, in London, he will find the supreme of power, the *ne plus ultra* of work according to the world's capability of working. At Niagara, there is that fall of waters alone. But that fall is more graceful than Giotto's tower, more noble than the Apollo. The peaks of the Alps are not so astounding in their solitude. The valleys of the Blue Mountains in Jamaica are less green. The finished glaze of life in Paris is less invariable; and the full tide of trade round the Bank of England is not so inexorably powerful.—*Anthony Trollope.*



GENERAL VIEW FROM PROSPECT POINT, STATE RESERVATION.

U.S. GEOLOGICAL SURVEY
WASHINGTON, D.C.

The Ice Bridge.

UPON the occurrence of a thaw sufficient to break up the ice in Lake Erie, masses of floating ice are precipitated over the Falls in blocks of several tons each. These remain at the foot of the cataract, from the stream being closed below, "and form a natural bridge across it. As they accumulate, they get progressively piled up, like a cyclopean wall. Built of huge blocks of ice instead of stone, this singular masonry of nature gets cemented by the spray, which, rising in clouds of mist as usual from the foot of the Falls, attaches itself in its upward progress to the icy wall, and soon gets frozen with the rest of the mass, helping to fill up the interstices between the larger blocks of which this architecture is composed."

This icy wall or mound rises up from the base in front of the Falls to a height approaching the level of the upper stream. Scaling the mound is an exhilarating and laborious exercise, but the near sight of the maddened waters plunging into the vortex below, is a fitting reward for the adventurous undertaking.

The ice-bridge generally extends from the Horse-shoe Fall to a point near the railway bridge, lasts generally from two to three months, and is crossed by hundreds of foot passengers during the winter. The ice forming the bridge is ordinarily from one hundred to one hundred and fifty feet thick—rising from fifty to sixty feet above the natural surface of the river. Huge icicles, formed by an accumulation of frozen spray, hang from the rocks; a mass of quaint and curious crystalline forms stand in lieu of the bushes; the buildings seem to sink under ponderous coverings of snow and ice; the trees and rocks on which the dazzling frost work does not lie stand out in bold contrast, forming the deep shadows of the entrancing picture; the whole presents a wild, savage aspect, grand and imposing.

LIBRARY
OF THE
UNIVERSITY
OF CALIFORNIA



THE ICE BRIDGE AND ICE MOUNTAIN AT FOOT OF AMERICAN FALL. THE HORSE-SHOE

From the Suspension Foot Bridge.

THE last hues of sunset lingered in the mists that sprung from the base of the Falls with a mournful, tremulous grace, and a movement weird as the play of the northern lights. They were touched with the most delicate purples and crimsons, that darkened to deep red, and then faded from them at a second look, and they flew upward, swiftly upward, like troops of pale, transparent ghosts; while a perfectly clear radiance, better than any other for local color, dwelt upon the scene. Far under the bridge the river smoothly swam, the under-currents forever unfolding themselves upon the surface with a vast rose-like evolution edged all round with faint lines of white, where the air that filled the water freed itself in foam. What had been clear green on the face of the cataract was here more like rich verd-antique, and had a look of firmness almost like that of the stone itself. So it showed beneath the bridge, and down the river till the curving shores hid it. These, springing abruptly from the water's brink, and shagged with pine and cedar, displayed the tender verdure of grass and bushes intermingled with the dark evergreens that climb from ledge to ledge, till they point their speary tops above the crest of bluffs. In front, where tumbled rocks and expanses of naked clay varied the gloomier and gayer green, sprung those spectral mists; and through them loomed out, in its manifold majesty, Niagara, with the seemingly immovable white Gothic screen of the American Fall, and the green massive curve of the Horse-shoe, solid and simple and calm as an Egyptian wall; while behind this, with their white and black expanses broken by dark foliaged little isles, the steep Canadian rapids billowed down between their heavily wooded shores.—*W. D. Howells*, in "*Their Wedding Journey*." Copyright, Houghton, Mifflin & Co.



SUSPENSION FOOT AND CARRIAGE BRIDGE FROM BELOW STATE RESERVATION.

Niagara.

HAS aught like this descended since the fountains
Of the Great Deep, broke up, in cataracts hurled,
And climbing lofty hills, eternal mountains,
Poured wave on wave above a buried world?

Yon tides are raging, as when storms have striven,
And the vexed seas, awaking from their sleep,
Are rough with foam, and Neptune's flocks are driven
In myriads o'er the green and azure deep.

Ere yet they fall, mark (where that mighty current
Comes like an army from its mountain home)
How fiercely yon steeds amid the torrent
With their dark flanks, and manes and crests of foam,

Speed to their doom,— yet, in the awful centre,
Where the wild waves rush madliest to the steep,
Just ere that white, unfathomed gulf they enter,
Rear back in horror from the headlong leap,

Then, maddening, plunge. A thousand more succeeding
Sweep onward, troop on troop, again to urge
The same fierce flight, as rapid and unheeding,—
Again to pause in terror on the verge.— *Henry Howard Brownell.*

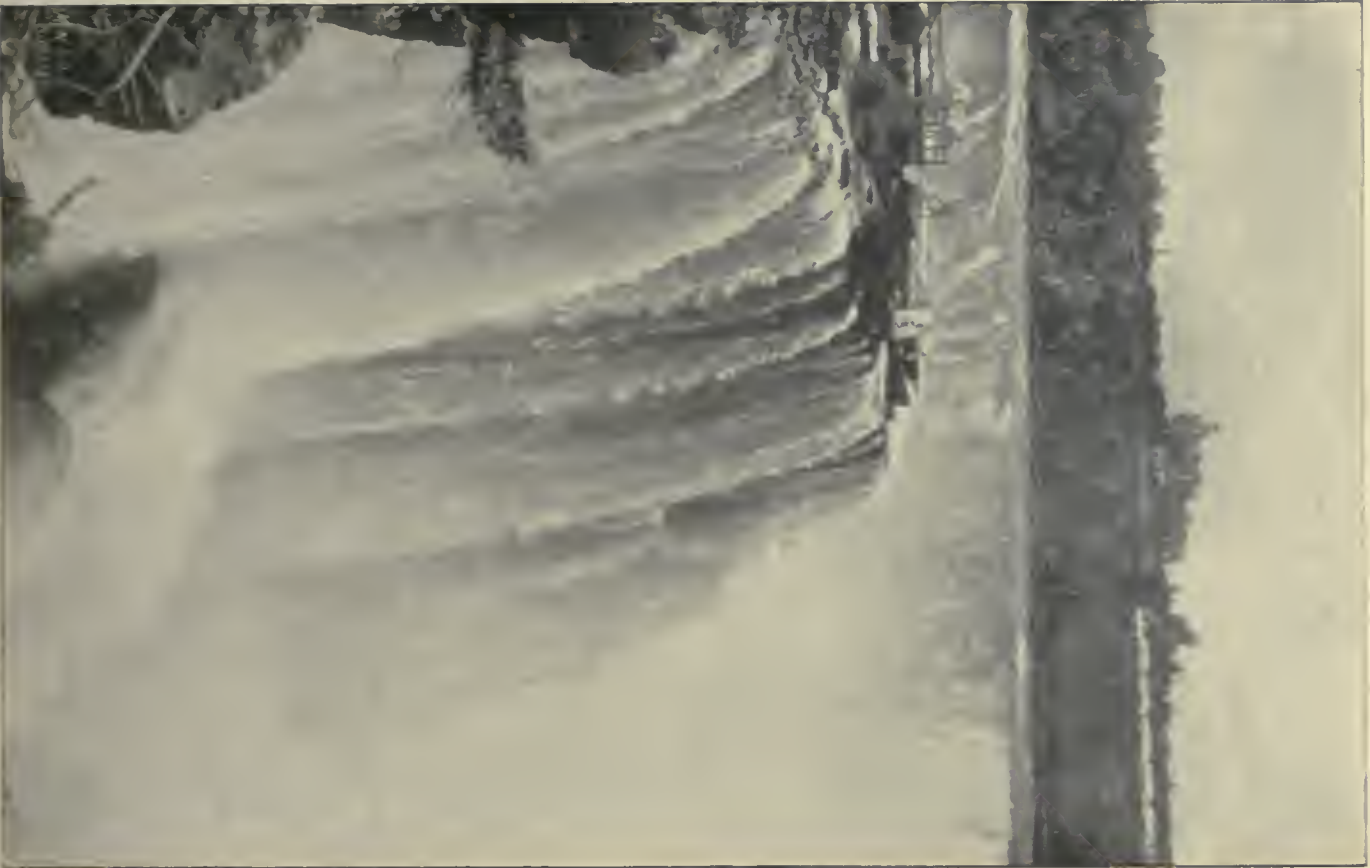


THE SISTER ISLANDS FROM GOAT ISLAND, STATE RESERVATION



The Horse-Shoe Fall from Goat Island.

THERE is no grander spot than this. The waters are absolutely around you. If you have that power of eye-control which is so necessary to the full enjoyment of scenery, you will see nothing but the water. That converging rush of water may fall down, down at once into a hell of rivers for what the eye can see. It is glorious to watch them in their first curve over the rocks. They come green as a bank of emeralds; but with a fitful flying color, as though conscious that in one moment more they would be dashed into spray and rise into air, pale as driven snow. The vapour rises high into the air, and is gathered there, visible always as a permanent white cloud over the cataract; but the bulk of the spray which fills the lower hollow of that horse-shoe is like a tumult of snow. The head of it rises ever and anon out of that caldron below, but the caldron itself will be invisible. It is ever so far down,—far as your own imagination can sink it. But your eyes will rest upon the full curve of the waters. The shape you will be looking at is that of a horse-shoe, but of a horse-shoe miraculously deep from toe to heel;—and this depth becomes greater as you sit there. That which at first was only great and beautiful, becomes gigantic and sublime till the mind is at a loss to find an epithet for its own use. To realize Niagara you must sit there till you see nothing else than that which you have come to see. You will find yourself among the waters as though you belonged to them. The cool liquid green will run through your veins, and the voice of the cataract will be the expression of your own heart. You will fall as the bright waters fall, rushing down into your new world with no hesitation and with no dismay; and you will rise again as the spray rises, bright, beautiful, and pure.—*Anthony Trollope.*

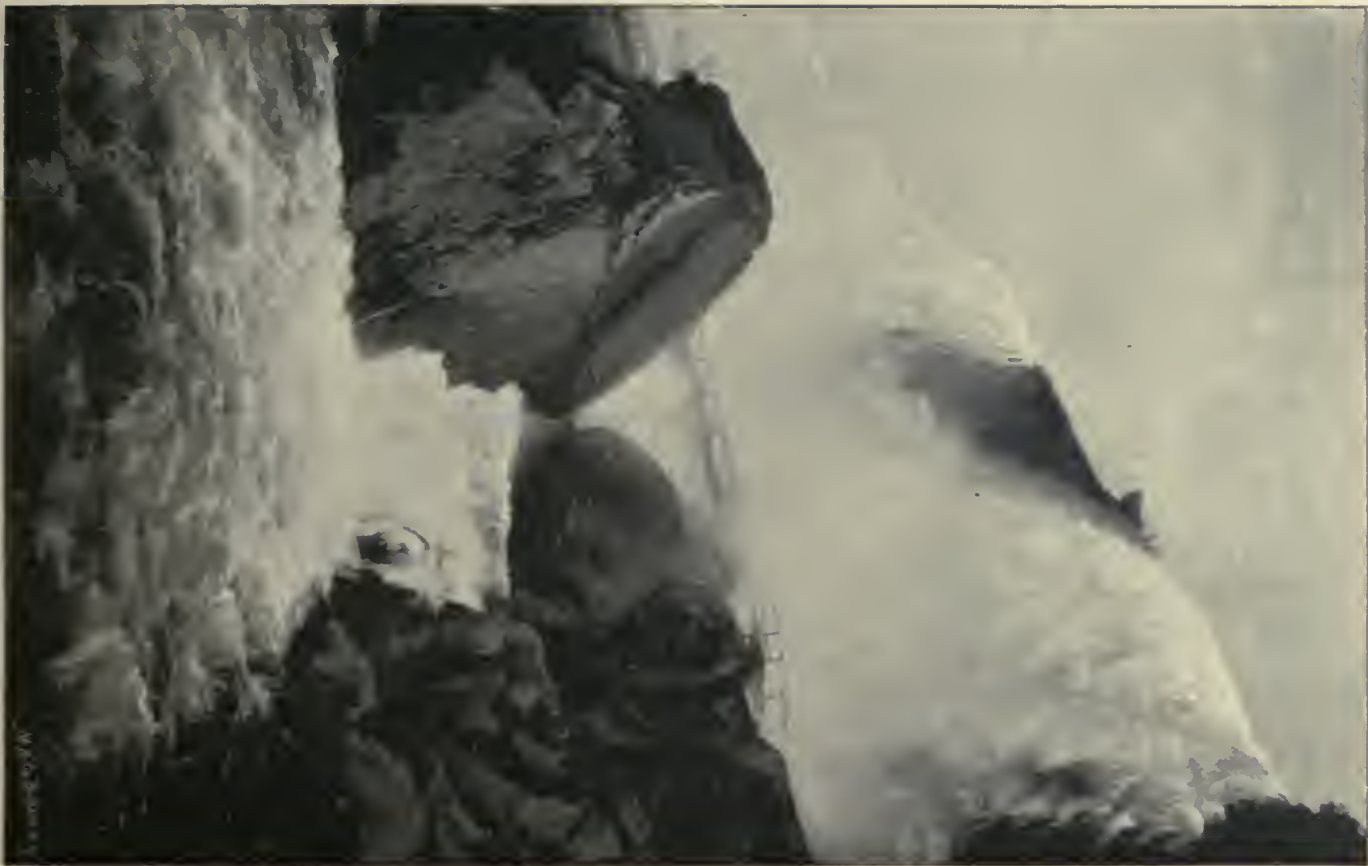


THE HORSE SHOE FALL FROM GOAT ISLAND

Niagara Falls.

THERE'S nothing great or bright, thou glorious fall !
Thou mayest not to the fancy's sense recall,—
The thunder-riven cloud, the lightning's leap,
The stirring of the chambers of the deep ;
Earth's emerald green and many tinted dyes,
The fleecy whiteness of the upper skies ;
The tread of armies, thickening as they come,
The boom of cannon and the beat of drum ;
The brow of beauty and the form of grace,
The passion and the prowess of our race ;
The song of Homer in its loftiest hour,
The unresisted sweep of human power,
Britannia's trident on the azure sea,
America's young shout of liberty !
Oh ! may the waves which madden in thy deep,
There spend their rage, nor climb the encircling steep ;
And, till the conflict of thy surges cease,
The nations on thy banks repose in peace.

— *Lord Morpeth.*



THE AMERICAN FALL FROM BELOW GOAT ISLAND.

M. F. Johnson, N.Y.

The Great Cataract from the Clifton House.

BEFORE the balcony in which this is written the great cataract of America is thundering, smoking, glittering with green and white rollers and rapids, hurling the waters of a whole continent in splendor and speed over the sharp ledges of the long, brown rock by which Erie "the Broad" steps proudly down to Ontario "the Beautiful." Close at hand on our left—not, indeed, farther removed than some six hundred or seven hundred yards—the smaller, but very imposing American Fall speaks with the louder voice of the two, because its coiling spirals of twisted and furious flood crash in full impulse of descent upon the talus of massive boulders heaped up at its feet.

The resounding impact of water on rock, the clouds of water-smoke which rise high in air, while the river below is churned into a whirling cream of eddy and surge and back-water, unite in a composite effect at once magnificent and bewildering. But if you listen attentively you will always hear the profound diapason of the great fall—that surnamed the Horse-shoe—sounding superbly amid the loudest clamor and tumult of its sister, a deeper and grander note; and whenever for a time the gaze rests with inexhaustible wonder upon that fierce and tumultuary American Fall, this mightier and still more marvelous Horse-shoe steals it away again with irresistible fascination. Full in front lies that wholly indescribable spectacle at this instant. Its solemn voice—an octave lower than the excited, leaping, almost angry cry of fervid life from the lesser cataract—resounds through the golden summer morning air like the distant roar from the streets of fifty Londons all in full activity.—*Sir Edwin Arnold.*



GENERAL VIEW OF NIAGARA FALLS FROM THE CLIFTON HOUSE, CANADA SIDE.



From City to Cataract.

FROM Toronto we steam across the lake to the village of Niagara, where a train is waiting to carry us on to the Falls about half an hour further on. We all watch from the windows, eager to catch our first glimpse of the world's great wonder. We feel a nervous anxiety to stand in its majestic presence. I quote from my companion's note-book on the spot: "There was a break in the wood, a flash of white, a cloud of spray tossed high above the tree-tops; then the dark woods closed again. That glimpse, flashing upon us and passing before we could fully realize that the great tumbling mass was indeed Niagara, can hardly be called our first view of it. * * * It was a moonless night, and in the dusk we could only obscurely trace the vast, vague outline of the two falls, divided by the blurred mass of shapeless shadows which we learned was Goat Island. As we looked upon them silently, and listened to the ceaseless boom like distant thunder, which shook the ground beneath our feet, across the snowy veil of the American Fall, to our left, shot rays of rosy light, which melted into amber, then into emerald. They were illuminating the great waters with colored calcium lights. * * * But the brilliant rays which fell across the American Falls, and which were turned on and off like a dissolving view, did not reach to the Horse-shoe Fall, away to our right. Vast, solemn, shadowy, we could just distinguish its form in the darkness, could hear the deep murmur of its awful voice. And there, between it and us, what was *that* we saw? Was it some huge, pale ghost standing sentinel before Niagara? White, spectral, motionless, it rose up and reached towards the stars—shapeless, dim, vague as a veiled ghost. There was something almost supernatural about it; it was like a great, colossal spectre wrapped in a robe of strange, dim light.—
Lady Duffus Hardy.



AMERICAN FALL FROM THE QUEEN VICTORIA NIAGARA FALLS PARK.

Niagara in Winter.

AFTER a few days of hard frost in winter, the Falls become more of a vision of some enchanted land than a real scene in our world. No marvels wrought by genii and magicians in the Eastern tales could surpass the wonderful creations that rise along the surrounding banks and hang over the walls of the cataract. Glittering wreaths of icicles like jeweled diadems gleam on the brow of every projecting rock and jutting crag. Arches, pillars, and porticos of shining splendor are grouped beneath the overhanging cliffs, giving fanciful suggestions of fairy palaces beyond. Every fallen fragment of rock under its icy covering becomes a marble pyramid or obelisk, and masses of frozen spray stand out here and there in graceful and statuesque forms, easily shaped by imagination into the half-finished work of a sculptor. Every rift and opening in the cliff is transformed into an alabaster grotto with friezes and mouldings all fretted and froze, with filagree wreaths and festoons and filmy veils and canopies of lace-like patterns and gossamer texture; and on every curve and angle, round every fissure and crevice, some fantastic and lovely decoration is woven by winter's master artist, King Frost. Over the Horse-shoe towards Goat Island and the Bridal Veil Fall, the water pours in thin silvery sheets, which dissolve in white curving mists as they slide slowly down pinnacles of ice, stretching high above them break these falling streams. The American Falls, through its hovering veil of spray, seems transformed into wreaths of frozen foam. The face of Goat Island is resplendent with huge many-tinted icicles, showing all the colors of the rock on which they are formed, and on either shore the under cliffs are hung with lovely draperies of frozen spray.—*Louise Murray.*



THE AMERICAN FALL IN WINTER, FROM THE CANADA SIDE.

Their Pilgrimage to Niagara.

THE slight bridge to Goat Island appeared more presumptuous by day-light, and the sharp slope of the rapids above it gave a new sense of the impetuosity of the torrent. As they walked slowly on, past the now abandoned paper mills and the other human impertinences, the elemental turmoil increased, and they seemed entering a world the foundations of which were broken up. This must have been a good deal a matter of impression, for other parties of sight-seers were coming and going, apparently unawed, and intent simply on visiting every point spoken of in the guide-book, and probably unconscious of the all-pervading terror. But King could not escape it, even in the throng ascending and descending the stairway to Luna Island. Standing upon the platform at the top, he realized for the first time the immense might of the downpour of the American Fall, and noted the pale green color, with here and there a violet tone, and the white cloud mass spurting out from the solid color. On the foam-crested river lay a rainbow forming nearly a complete circle. The little steamer "Maid of the Mist" was coming up, riding the waves, dashed here and there by conflicting currents, but resolutely steaming on—such is the audacity of man—and poking her venturesome nose into the boiling foam under the Horse-shoe. On the deck are pigmy passengers in oil-skin suits—clumsy figures, like arctic explorers. The boat tosses about like a chip, it hesitates and quivers, and then slowly swinging, darts away down the current, fleeing from the wrath of the water and pursued by the angry roar.—*Charles Dudley Warner. From "Their Pilgrimage;" copyright, 1886, by Harper & Brothers.*

U
C
S



THE HORSE-SHOE FALL FROM INSPIRATION POINT, QUEEN VICTORIA NIAGARA FALLS PARK.

Niagara in Winter.

I HAVE seen the Falls in all weathers and in all seasons, but to my mind the winter view is most beautiful. I saw them first during the hard winter of 1854, when a hundred cataracts of ice hung from the cliffs on either side, when the masses of ice brought down from Lake Erie were together at the foot, uniting the shores with a rugged bridge, and when every twig of every tree and bush on Goat Island was overlaid an inch deep with a coating of solid crystal. The air was still, and the sun shone in a cloudless sky. The green of the fall, set in a landscape of sparkling silver, was infinitely more brilliant than in summer, when it is balanced by the trees, and the rainbows were almost too glorious for the eye to bear. I was not impressed by the sublimity of the scene, nor even by its terror, but solely by the fascination of its wonderful beauty,—a fascination which continually tempted me to plunge into that sea of fused emerald, and lose myself in the dance of the rainbows. With each succeeding visit, Niagara has grown in height, in power, in majesty, in solemnity; but I have seen its climax of beauty.—*Bayard Taylor.*

La grandeur merveilleuse du tableau qu'il vous est donné de contempler est telle qu'on éprouve une émotion sans pareille. De gigantesques stalactites glacées, de 50 mètres de hauteur environ, toutes brillantes au soleil, semblent prêtes à vous écraser par leur masse formidable. Les chutes d'eau étincelantes aux couleurs d'émeraude qui se précipitent du fer à cheval accompagnées des vapeurs d'eau s'élevant dans le ciel, la neige éblouissante des premiers plans, forment des scènes si extraordinaires qu'elles dépassent véritablement ce que l'homme peut rêver et pendent les quelques instants de contemplation notre imagination en retraits presque comme troublée.—*Albert Tissandier.*

UNDER THE HORSE-SHOE FALL IN WINTER



Impressions of Niagara.

THEN, 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, for ever.

Oh, how the strife and trouble of daily life receded from my view, and lessened in the distance, during the ten memorable days we passed on that Enchanted Ground! What voices spoke from out the thundering water; what faces, faded from the earth, looked out upon me from its gleaming depths; what Heavenly promise glistened in those angel's tears, the drops of many hues, that showered around, and twined themselves about the gorgeous arches which the changing rainbows made!

I think in every quiet season now, still do those waters roll and leap, and roar and tumble, all day long; still are the rainbows spanning them, a hundred feet below. Still, when the sun is on them, do they shine and glow like molten gold. Still, when the day is gloomy, do they fall like snow, or seem to crumble away like the front of a great chalk cliff, or roll down the rock like dense white smoke. But always does the mighty stream appear to die as it comes down, and always from its unfathomable grave arises that tremendous ghost of spray and mist, which is never laid: which has haunted this place with the same dread solemnity since Darkness brooded on the deep, and that first flood before the Deluge—Light—came rushing on Creation at the word of God.—

Charles Dickens.



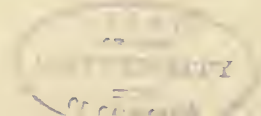
SCENE FROM FALLS VIEW, OVERLOOKING QUEEN VICTORIA NIAGARA FALLS PARK.

“The Niagara Falls Route.”

THE Michigan Central is the only real “Niagara Falls Route.” It is the only railroad that gives a satisfactory view of the Falls. Every train stops five minutes at Falls View, which is what the name indicates, a splendid point from which to view the great cataract. It is right on the brink of the grand cañon, at the Canadian end of the Horse-shoe, and every part of the Falls is in plain sight. Even if he is too ill or too lazy to get out of his car, every passenger can see the liquid wonder of the world from the window or the platform. This is the Michigan Central’s strongest hold on popular favor, its greatest advantage, its chief attraction. So long as the waters of that mighty river thunder down to the awful depths below, so long as the rush and roar, the surge and foam and prismatic spray of nature’s cataractic masterpiece remain to delight and awe the human soul, thousands and tens of thousands of beauty-lovers and grandeur-worshipers will journey over the only railroad from which it can be seen. There is but one Niagara Falls on earth, and but one direct great railway to it.—*Col. P. Donan, in St. Louis Spectator.*



NIAGARA FROM FALLS VIEW, FROM WATER-COLOR BY CHAS. GRAHAM, FOR MICHIGAN CENTRAL RAILROAD



The Earliest Account.

BETWIXT the Lakes Ontario and Erie, there is a vast and prodigious cadence of water, which falls down after a surprising and astounding manner; insomuch that the universe does not afford its parallel. 'Tis true, Italy and Suedland boast of some such things, but we may well say they are but sorry patterns when compared with this of which we now speak. At the foot of this horrible precipice we meet with the river Niagara, which is not above a quarter of a league broad, but is wonderfully deep in some places. It is so rapid above this descent that it violently hurries down the wild beasts while endeavoring to pass it to feed on the other side, they not being able to withstand the force of its current, which inevitably casts them headlong, above six hundred feet high.

This wonderful downfall is compounded of two great cross streams of water and two falls, with an isle sloping along the middle of it. The waters which fall from this horrible precipice do foam and boil after the most hideous manner imaginable, making 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.

The rebounding of these waters is so great that a sort of cloud arises from the foam of it which is seen hanging over this abyss, even at noon-day, when the sun is at its height. In the midst of summer, when the weather is hottest, they rise above the tallest firs, and other great trees which grow on the sloping island which makes the two falls of water that I spoke of.—*Father Louis Hennepin.*

UNIVERSITY



M. H. Co.

A GLIMPSE OF THE AMERICAN FALL FROM THE MICHIGAN CENTRAL

The Cantilever Bridge.

Each end is made up of a section, entirely of steel, extending from the shore nearly half way over the chasm. Each section is supported near its center by a strong steel tower, from which extend two lever arms, one reaching the rocky bluffs, the other extending over the river 175 feet beyond the towers. The outer arm having no support, and being subject like the other to the weight of trains, a counter-advantage is given by the shore arm being firmly anchored to the rocks on the shore. The towers on either side rise from the water's edge; between them a clear span of 495 feet over the river, the longest double-track truss-span in the world. The ends of the cantilevers reaching on each side 395 feet from the abutments, leave a gap of 120 feet filled by an ordinary truss bridge hung from the ends of the cantilevers. Here provision is made for expansion and contraction by an ingenious arrangement between the ends of the truss bridge and of the cantilevers, allowing the ends to move freely as the temperature changes, but at the same time preserving perfect rigidity against side pressure from the wind. There are no guys for this purpose, as in a suspension bridge, but the structure is complete within itself. The total length of the bridge is 910 feet. It has a double track, and is strong enough to carry upon each track at the same time the heaviest freight train, extending the entire length of the bridge, headed by two "consolidation" engines and under a side pressure of thirty pounds per square foot, produced by a wind having a velocity of seventy-five miles per hour, and even then will be strained to only one-fifth of its ultimate strength.



THE STEEL CANTILEVER BRIDGE OF THE MICHIGAN CENTRAL



The Erosion of the Gorge.

IT is a matter of direct observation that, from time to time, large rocks of the upper limestone fall away into the pool, and there seems no escape from the inference that this occurs because the erosion of the shale beneath deprives the limestone of its support. Just how the shale is eroded, and what is the part played by the harder layers beneath, are questions in regard to which we are much in doubt. In the Cave of the Winds, where one can pass beneath and behind one of the thinner segments of the divided fall, the air is filled with spray and heavier masses of water that perpetually dash against the shale, and though their force in that place does not seem to be violent, it is possible that their continual beating is the action that removes the shaly rock. The shale is of the variety known as calcareous, and as its calcareous element is soluble, it may be that solution plays its part in the work of undermining. What goes on beneath the waters of the pool must be essentially different. The Niagara River carries no sediment, and therefore cannot scour its channel in the manner of most rivers, but the fragments of the limestone bed that fall into the pool must be moved by the plunging water, else they would accumulate and impede its work; and, being moved, we can understand that they become powerful agents of excavation. Water plunging into a pool acquires a gyratory motion, and, carrying detritus about with it, sometimes bores deep holes, even in rocks that are hard. These holes are technically called "pot-holes," and there is much to commend the suggestion that the excavation within the pool is essentially pot-hole work.—*Prof. G. K. Gilbert.*

OF THE
UNIVERSITY
OF CALIFORNIA



THE WHIRLPOOL RAPIDS FROM THE CANTILEVER BRIDGE

The History of Niagara River.

LET us put together what we have learned of the Niagara history. The river began its existence during the final retreat of the great ice sheet, or, in other words, during the series of events that closed the age of ice in North America. If we consider as a geologic period the entire time that has elapsed since the beginning of the age of ice, then the history of the Niagara River covers only a portion of that period. In the judgment of most students of glacial geology, and, I may add, in my own judgment, it covers only a small portion of that period. During the course of its history, the length of the river has suffered some variation by reason of the successive fall and rise of the level of Lake Ontario. It was at first a few miles shorter than now; then it became suddenly a few miles longer, and its present length was gradually acquired. With the change in the position of its mouth, there went a change in the height of its mouth; and the rate at which it eroded the channel was affected thereby. The influence on the rate of erosion was felt chiefly along the lower course of the river, between Lewiston and Fort Niagara. The volume of the river has likewise been inconstant. In early days, when the lakes levied a large tribute on the melting glacier, the Niagara may have been a larger river than now; but there was a time when the discharge from the upper lakes avoided the route by Lake Erie, and then the Niagara was a relatively small stream.—*Prof. G. K. Gilbert.*



THE WHIRLPOOL RAPIDS FROM THE AMERICAN SIDE.

THE thoughts are strange that crowd into my brain
While I look upward to thee. It would seem
As if God pour'd thee from His "hollow hand"
And hung His bow upon thine awful front,
And spoke in that loud voice which seem'd to him
Who dwelt in Patmos for his Saviour's sake,
The sound of many waters, and had bade
Thy flood to chronicle the ages back,
And notch his cent'ries in the eternal rocks.

— *John G. C. Brainard.*



CASCADE IN SWISS GLEN AT THE WHIRLPOOL.

LIBRARY
OF THE
UNIVERSITY

The Whirlpool.

WE witness at the Whirlpool on the Canada side "The culminating act of the Niagara drama." Little known and less appreciated by the generality of travelers, to the thinker the Whirlpool is the most fascinating spot along the river, more awful in the mysterious swirl of its waters and in the eternity of ages its past involves than the cataract itself. Compressed within these narrow limits is the drainage of half a continent. Two of the three sides are steep, rocky precipices like the rest of the river gorge. The other is a sheer slope of primeval forest, at which the water rushes with the tremendous force acquired in its swift descent. To account for this wooded declivity carries one far deeper into the fathomless ages than any possible calculations as to the period required for the Falls to dig the gorge from Queenston.

Through an unwillingness to believe the commonly received theory that the concavity of this basin is due to the erosion of the water striking constantly against the bank, and believing the mysterious weakness of the northwestern end of the whirlpool indicated traces of the buried outlet of a former river, was begun the investigation which has dispelled in so many minds the illusion that the Falls of Niagara were once at Lewiston. Having conceived the idea of an ancient stream, the present Tonawanda, carving out, in a period preceding the ice-age, a channel as far as the whirlpool for its destined successor, the Niagara, the new theory about the cataract is readily understood. From the whirlpool the Tonawanda had its outlet through what is now the closed, wooded side of the basin known as the St. David's Valley. The modern river, following a shallow valley of a preceding era, quickly excavated that part of the gorge between the whirlpool and Lewiston.—*Jane Meade Welch. From Harper's Magazine; copyright, 1887, by Harper & Brothers.*



THE WHIRLPOOL AND ITS OUTLET, LOOKING DOWN THE RIVER FROM CANADA SIDE.

ADMISSION FEES, RATES AND TOLLS.

Cave of the Winds (with guide and dress),	\$1.00
Inclined Railway (Prospect Park), round trip down and return,	.10
Hydraulic Elevator at Horse-Shoe Falls, Canada side, with guide and dress, 50 cents. Without guide and dress,	.25
Museum (American side),	.50
Whirlpool Rapids (either side),	.50
Whirlpool (either side),	.50
Crossing New Suspension Bridge (over and return), 25 cents. Extra for each vehicle,	.25
Crossing Railway Suspension Bridge, over and return (no charge for carriage),	.10
Ride in van from Goat Island 10 cents. Around Goat Island,	.15
Ride in van around entire Reservation with privilege of stopping off at any or every point of interest, and continuing the ride in following vans,	.25
"Maid of the Mist," from foot of Inclined Railway to Horse-Shoe Falls, landing on Canada side and return,	.50
Niagara Falls and Suspension Bridge Street Railway, from Soldiers' Monument, Niagara Falls to Suspension Bridge, fare,	.05
Dufferin Islands, pedestrians 10 cents. Carriage with occupants,	.50
Round trip to Whirlpool Rapids, Canada side, via Old Suspension Bridge and Horse-car line.	.40
Round trip to Whirlpool Rapids, American side, via cars,	.40
Round trip to Whirlpool, American side, via horse-car and transfer carriages,	.55

RATES OF FARE ALLOWED BY LAW IN THE VILLAGE OF NIAGARA FALLS, N. Y.

For the Use and Hire of Carriages where no express contract is made therefor.

For carrying one passenger and ordinary baggage from one place to another, in the village,	\$0.50
Each additional passenger and ordinary baggage,	.25
For carrying one passenger and ordinary baggage from any point in the village to any point in the village of Suspension Bridge,	1.00
Each additional passenger and ordinary baggage,	.50
Each additional piece of baggage, other than ordinary baggage,	.12

Children under three years of age, free. Over three years and under fourteen years of age, half price.

Ordinary baggage is defined to be one trunk and one bag, hat or bandbox, or other small parcel.

For carrying one or more passengers in the same carriage from any point in this village to any point within five miles of the limits of the village, at the rate of two dollars for the first hour and one dollar and fifty cents for each additional hour occupied, except in every instance where such carriage shall be drawn by a single horse, the fare thereof shall be at the rate of one dollar and fifty cents for the first hour, and one dollar for each additional hour occupied.

Boston's Back Bay Hotels

THE VICTORIA.
EUROPEAN PLAN.



Mathias Northrup & Co. Buff. N.Y.



THE BRUNSWICK.
AMERICAN & EUROPEAN PLANS.
Amos Barnes.
John W. Dunklee.
Barnes & Dunklee,
Proprietors.



WICKES PATENT COLD STORAGE WAREHOUSE AND REFRIGERATOR CARS, AT SUSPENSION BRIDGE, ON LINE OF MICHIGAN CENTRAL

Reed & Barton.

FOUNDED 1824.

MAKERS
OF

Sterling Silver
Artistic and Electro Plate
of Finest Quality and Design.

Salesrooms

AT THEIR 37
FACTORIES UNION SQ.
TAUNTON, MASS. NEW YORK



FACTORIES TAUNTON, MASS.

OUR GOODS
SOLD BY THE PRINCIPAL DEALERS
IN SILVER AND PLATED WARE.



The Billings & Spencer Co.

MARYFORD, CONN., U.S.A.

Manufacturers of
DROP FORGINGS

OF EVERY DESCRIPTION

IN
**STEEL,
IRON,
COPPER,
AND
BRONZE.**



ALSO MANUFACTURERS OF
MACHINISTS' TOOLS
OF BEST
WORKMANSHIP
— AND —
MATERIAL.

"VULCAN SURPRISED"

Nature's Remedy. "A WONDERFUL MEDICINE"



MINERAL

ATLANTIS WATER,

FROM THE **SALTS** WELL.

COUGHS ATLANTIS MINERAL & COLDS

№ 2

T·C·OWEN · YPSILANTI, MICH.

YPSILANTI
MINERALS WATER
AND VARIOUS
PRODUCTS.

*SHIPPED in its NATURAL
CONDITION.*

TRADE MARK

Nos 1-2-3

ATLANTIS MINERAL WATER OINTMENT.

.. .. PLASTERS.

.. .. SALICURA SOAP.

PARAGON, PARAGON GINGER ALE. PARAGON MEAD.
CONCENTRATED MINERAL WATER.





GENERAL OFFICE.
43 Sixth Ave Pittsburgh, Pa

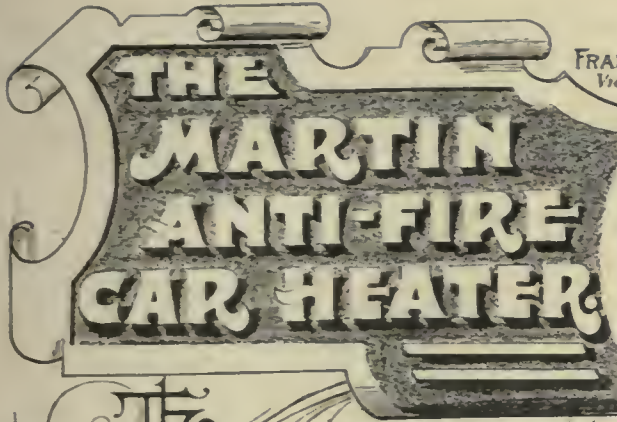
GENERAL SHOW ROOMS,
729 Broadway, New York

LAMP DEPARTMENT,
258 Broadway, New York



GLASS
PHOENIX COMPANY.

Manufacturers of
Rich Cut Crystal Tableware
Fine Decorated Vase Lamps.
Gas, Kerosene & Electric Globes, Shades
&c. &c.



W^m MARTIN,
President

FRANK E. SHAW, W. E. CANDEE,
Vice Pres & Treas Secy

NOW IN USE ON MORE THAN 4000 CARS & ENGINES

Adopted by
the following Railroads:

BOSTON & ALBANY. LONG ISLAND.
NEW YORK CENTRAL & HUDSON RIVER.
UNION PACIFIC. ● KINGS CO. ELEVATED.
DUNKIRK, ALLEGHANY VALLEY & PITTSBURG
MICHIGAN CENTRAL.

LAKE SHORE & MICHIGAN SOUTHERN.
BEECH CREEK. ● CLEVELAND & CANTON.
CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.
PROVIDENCE & WORCESTER.
NEW YORK, SUSQUEHANNA & WESTERN.
BUFFALO, ROCHESTER & PITTSBURG.
WESTSHORE. LEHIGH VALLEY. FALL BROOK.
DETROIT, LANSING & NORTHERN.
NORTHERN CENTRAL DIVISION
OF THE PENNSYLVANIA SYSTEM.
ELMIRA, CORTLAND & NORTHERN.

The Entire Passenger Equipment of the
MICHIGAN CENTRAL R. R.
HAS THE
Martin System of Steam Heating.

The
Martin Anti-Fire Car Heater Co.
DUNKIRK, N. Y.

also Manufacturers of

- MARTIN'S COMBINATION CAR HEATER.
- DE KALB VENTILATING CAR WINDOW.
- AUTOMATIC CAR LIGHT EXTINGUISHER.
- AUTOMATIC STEAM TRAP.
- REDUCING PRESSURE VALVES.
- SUPERIOR QUALITY BRASS AND IRON STEAM FITTINGS.

WHOLESALE DEALERS IN STEEL & WROUGHT IRON PIPE.

ESTABLISHED

1872.

BONDS OF SURETYSHIP

NO OTHER BUSINESS.

The Guarantee Company of North America.

THE OLDEST AND LARGEST IN AMERICA.
CONDUCTED UNDER
AN EXPERIENCE OF —
— OVER THIRTY-THREE YEARS.

UNITED STATES BRANCHES.

Paid up Capital and Resources over...\$1,048,429.
Special Deposits in the United States...\$240,000.
Losses paid to date, over.....\$717,500.

HEAD OFFICE

157 ST. JAMES ST., MONTREAL.

Sir Alexander T. Galt, PRESIDENT.

Edward Rawlings, VICE PRESIDENT & MANAGING DIRECTOR.

- NEW YORK, 111 Broadway, D. J. TOMPKINS, Secretary.
- BOSTON, 17 Central Street, G. W. GREGERSON, Agent.
- PHILADELPHIA, 506 Walnut Street, A. F. SABINE, Resident Sec'y.
- BALTIMORE, 5 Produce Exchange, W. S. WILKINSON, Agent.
- PITTSBURGH, 102 Fourth Avenue, WM. M. GRANGER, Agent.
- CHICAGO, 175 La Salle Street, JAS. GRANT, Secretary.
- ST. LOUIS, 117 North Third Street, CHAS. L. CASE & BRO., Agents.
- LOUISVILLE, Bank Clearing House, CLINTON McCLARTY, Agent.
- NASHVILLE, 8 Noel Block, COOLEY, METZGER & KEITH, Agents.
- RICHMOND, 1104½ Main Street, PLEASANTS & CO., Agents.
- DETROIT, 88 Griswold Street, F. GRAHAM, Agent.

MANUFACTURERS OF

**ILLINOIS
STEEL CO.**

BESSEMER STEEL RAILS

FROM 8 TO 100 POUNDS PER YARD.

Rolls for
Standard Shapes
Sections in Stock.

Special Shapes
Sections Made to Order.

**BESSEMER, FOUNDRY AND MILL PIG IRON.
SPIEGEL AND FERRO-MANGANESE.**

IRON AND STEEL MERCHANT BAR, NAILS AND RAIL FASTENINGS,
LIGHT "T" AND STREET RAILS; STEEL BLOOMS, SLABS BILLETS
AND WIRE RODS OF ANY REQUIRED CHEMICAL COMPOSITION;
IRON OR STEEL CAR TRUCK CHANNELS AND STEEL "I"
BEAMS AND STRUCTURAL SHAPES.

This Company Owns and Operates Five Works namely:

**NORTH WORKS AND UNION WORKS, CHICAGO:
SOUTH WORKS, SOUTH CHICAGO:
JOLIET WORKS; MILWAUKEE WORKS.**

GENERAL OFFICES — Tenth Floor, Rookery Building, Chicago, Ills.
J. L. YALE, General Sales Agent.

NEW YORK OFFICE — 46 Wall Street, New York City.

MILWAUKEE OFFICE — 151 N. W. Ins. Building, Milwaukee, Wis.

ST. LOUIS OFFICE — Laclede Building, D. E. GARRISON & CO., Agents.

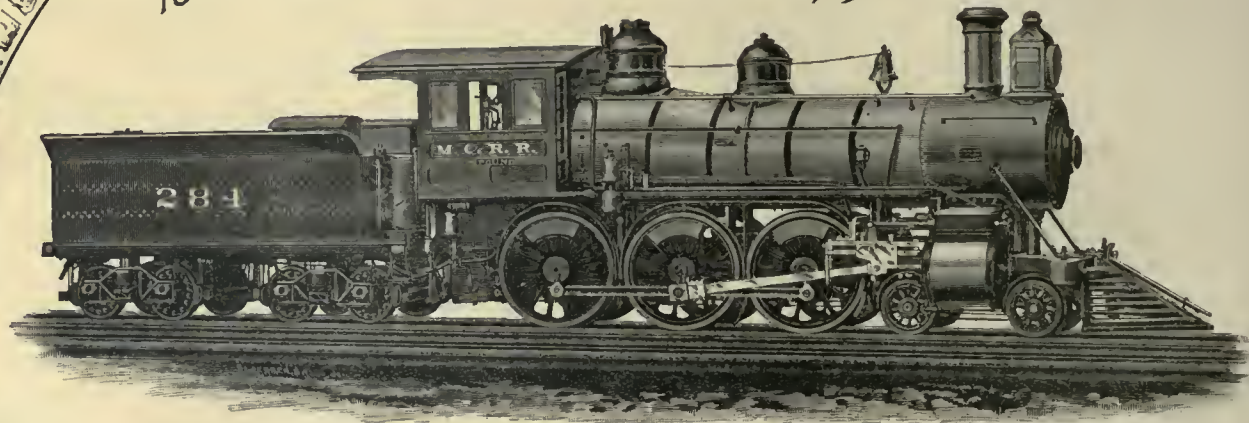
Schenectady

LOCOMOTIVE WORKS.

1848 ANNUAL CAPACITY 350 1890

Schenectady, N.Y.

CHAS. G. ELLIS, Prest.
WALTER McQUEEN, V. Prest.
EDWARD ELLIS, Treas.
H. J. PITKIN, Supt.



LOCOMOTIVES OF STANDARD DESIGN FOR ALL CLASSES OF SERVICE,
OR FROM DESIGNS FURNISHED BY RAILROAD COMPANIES.

Juniata Iron and Steel Works.

SHOENBERGER & CO.
PITTSBURGH, PA.

MANUFACTURERS OF

HOMOGENEOUS STEEL,

FOR

LOCOMOTIVE FIRE BOXES & BOILERS.

PLATE AND TANK STEEL

OF ALL DESCRIPTIONS.

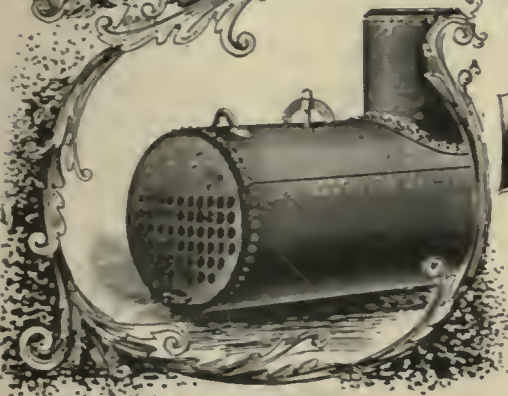
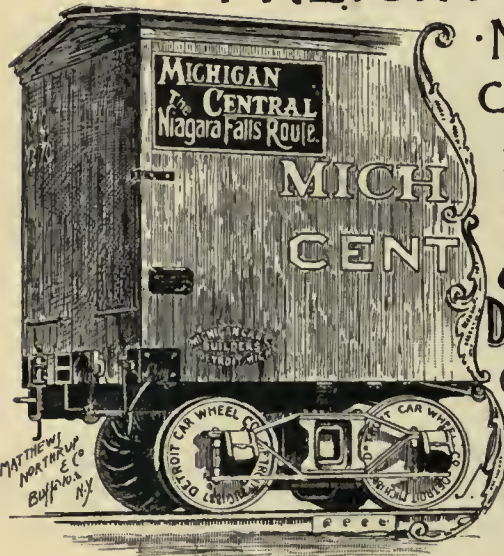


Illustration by H. H. Hartung, c. 1880

MICHIGAN CAR CO. MANUFACTURERS OF

= FREIGHT-AND-REFRIGERATOR-CARS



· NEWBERRY · BLDG · DETROIT · MICH ·
CAPACITY, 10,000 CARS PER ANNUM

JAMES McMILLAN, Pres.
HUGH McMILLAN, Vice-Prest.
W.C. McMILLAN, Gen. Mgr.
JAS. McGREGOR, Gen. Supr.

W.K. ANDERSON, Treas.
JOSEPH TAYLOR, Secy.
R.E. PLUMB, Gen. Agenl.
GEO. O. BEGG, Purchasing Agenl.

DETROIT CAR WHEEL CO.

MANUFACTURERS OF
CAR WHEELS AND RAILROAD CASTINGS
ALSO, GENERAL FOUNDRY WORK
DETROIT · MICH.

JAMES McMILLAN, Pres. | J.H. WHITING, Supt.
HUGH McMILLAN, V. Pres. | W.K. ANDERSON, Treas.
W.C. McMILLAN, Secy and Gen. Mgr.

BAUGH STEAM FORGE CO.

Manufacturers of all Descriptions of
DETROIT, MICH.
MERCH. BAR AND FORGED IRON,
FOR ALL KINDS OF RAILROAD WORK

JAMES McMILLAN, Pres. | SAMUEL BAUGH, Supt.
HUGH McMILLAN, Vice-Prest. | R.D. FIELD, Secy.
JOHN B. BAUGH, Gen. Mgr. | W.K. ANDERSON, Treas.

THE SAFETY CAR HEATING & LIGHTING COMPANY.

A.W. SOPER. ROBERT ANDREWS,
PRESIDENT. VICE-PRES.

CAR LIGHTING.

By compressed oil gas. The Celebrated Pintsch system, absolutely safe and the most brilliant light ever introduced into Railway coaches. In Europe over 30,000 are now equipped with this light. It has been used as the standard light on the NEW YORK, LAKE ERIE & WESTERN and the WEST SHORE for over five years.

The Vanderbilt system; Boston & Albany; Old Colony; New York, Boston & Providence; Central R.R. of New Jersey; Cincinnati, Hamilton & Dayton; Louisville, New Albany & Chicago; Chicago & Atlantic; Wabash; both the Great Palace Car Companies of America, and many other Railways are lighting their Cars by this system.

CAR HEATING.

Hot water circulation by the application of steam. The standard system, quick circulation, uniform heat, economical, safe and reliable, leaving the car heaters always ready for emergencies. This system for heating in use on the above and many other lines. We have also a perfected system of heating by direct steam.

OFFICE, 160 BROADWAY,
NEW YORK.

UNIVERSITY OF CALIFORNIA LIBRARY,
BERKELEY

THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW

Books not returned on time are subject to a fine of
50c per volume after the third day overdue, increasing
to \$1.00 per volume after the sixth day. Books not in
demand may be renewed if application is made before
expiration of loan period.



Celebrated
FOR LA

181 Broadway (near Cortlandt St.)
178-180 Fifth Ave. (bet. 22nd and 23rd Sts)

NEW YORK



IN ALL THE
OF

SEP 16 1921

APR 5 1924

JUL 1 1928

OCT 1 1928

31 May '63BP

RECEIVED

1963

MEN

Riding

THE
DUNLAP
Umbrella

YC 28368



F127
- 112 F2
73250
UNIVERSITY OF CALIFORNIA LIBRARY

