

Premier, now closely hedged in by an admiring crowd, most of whom were ladies, proceeded in a workman-like manner to cut the sod. Having filled his barrow, wheeled it along the plank prepared for him, and upset it at the other end, the Premier retired to the platform which had been erected in the ring, amidst the hearty cheers of the assemblage.

The Reeve of Brock, Malcolm Gillespie, Esq., then, on behalf of the Corporation and inhabitants of the township, presented a congratulatory address to the Hon. J. S. Macdonald, expressing the gratification felt at the prospect of the completion of the enterprise which he had so auspiciously begun. To this the Premier made a suitable reply, in which he said:

"I am much consoled by your hearty recognition of any service I may have rendered in furthering the hopes of this great enterprise; and in the future as in the past, it shall be my constant aim, by studying carefully and labouring earnestly, to advance the material interests of this noble Province, to secure and to merit the undiminished confidence which you have been pleased to express in my administration and for which I beg most cordially to thank you."

Another address, signed by Robt. W. Elliot, President, and James Graham, Secretary, was presented to the Premier, on behalf of the Directors of the Railway Company, which was also suitably acknowledged, after which the Hon. J. S. Macdonald delivered a short address on the prospects of the railway and the advantages it would confer. He was followed by the Hon. M. C. Cameron and Mr. Gillespie. The party then adjourned to luncheon prepared at the Town Hall, where, after the usual loyal and patriotic toasts, Mr. G. Laidlaw proposed the Ontario Government, to which the Premier responded. Other toasts followed, after which the party broke up, and the Toronto gentlemen returned home, arriving a little after midnight.

The illustration which we give is Leggotyped from a photograph by Ewing of Toronto. Many of our readers will readily recognise in the central figure (armed with a spade, and standing by the wheel-barrow ready to commence operations) the tall form of the Hon. J. S. Macdonald, Premier of Ontario, and hero of the day. On his right, occupying prominent places, stand R. W. Elliot, Esq., President of the Toronto and Nipissing Railway Company, Hon. J. B. Robinson, President Northern Railway Company, S. B. Harman, Esq., Mayor, Toronto, Messrs. Gould and Laidlaw. On the left of the Premier are other members of the Board, the Vice-President J. E. Smith, Esq., Messrs. McMaster and Fitch, Hon. G. W. Allan and H. Brethour, Esq., Mr. Leys, Solicitor, Mr. Graham, Secretary, etc., etc. The background of the picture tells plainly of the primeval forest through which the "iron horse" is about to make his way. It is here both termini offer inducements for traffic and the intervening country rich by nature but in great part uncultivated, that the railroad performs its highest function as a modern civilizer, and these conditions appear to apply to all the new railway projects in the western part of Ontario. They will be a source of wealth to the Province though they do not pay a dividend on their cost for twenty years to come. Nor will these enterprises benefit the trade of Toronto or other commercial centres so much as the agricultural sections through which they run; for the moment a railroad is opened through an agricultural district there takes place a positive increase in the annual value of every farm, which is only partially represented by the reduction in the cost of transferring its produce to market.

THE GREAT ST. PANCRAS RAILWAY STATION.

This week we gave an engraving of the interior of the new St. Pancras Station, Midland Railway, London. Occupying, as it does, a site of nearly ten acres, it is undoubtedly, if not from an architectural, at least from an engineering point of view, the finest terminus in the world. Its most interesting and peculiar feature is the roof. While it has the widest span of any roof in existence, the space beneath is unbroken by ties or braces, common to all others. Its style is subdued Gothic, with segments meeting at its crown. As shown in the engraving, the roof springs from the platform level, the principal ribs each having the form of a four-centered arch, the radii of the curves being 57 feet and 109 feet respectively. The two central curves—those of 160 feet radius—meet at an angle in the centre at a height of 96 feet above the platform level. The length of the roof is 690 feet with a clear span of 246 feet, covering five platforms, ten lines of rails, and a cab stand 25 feet wide, thus making a total area of 165,690 square feet. Its height at the ridge is 125 feet above the level of the road. There are twenty-five principal ribs in the roof, each weighing about 50 tons. Between each of these, which are about 29 feet 4 inches apart from centre to centre, are three intermediate ribs, carried by trussed purlins, constructed so as to stiffen the bottom flanges of the main ribs laterally. The station walls rise behind the spring of the principal, the space at the top being filled in with open iron-work.

The roof is glazed about 70 feet on each side of the centre, and the remainder is covered with slates on boarding one inch and three eighths thick, grooved and tongued and channeled, the underside being varnished. The slates are best Welsh, and securely fastened to the boarding with copper nails weighing about 7 lbs. per 1,000. The lap is not less than 3 inches. The timber work throughout is well protected by varnishing, painting, or Burnettizing, according to the situation in which it is fixed.

The transverse girders which support the floor of the station take the thrust of the roof. They are connected so as to form continuous girders across the station. Besides being tied to them, the foot of the ribs are each secured by four 3 inch bolts to an anchor-plate built into the wall and strongly fastened.

The rail level of the station is about 17½ feet above that of the adjoining streets, thus affording very extensive cellarage. The height of the basement story is 13 feet 6 inches, and under this basement the connection of the Midland line is carried to that of the Metropolitan system. To enable vehicles to reach the station level from the street, inclined approach roadways have been constructed on arches. Each side of the station is flanked by a row of picturesque shops and other buildings. The platforms have edges of dressed stone, and are floored with red deal planks, dressed, close-jointed, and tongued with hoop iron. The decorations include a tessellated frieze about two feet deep, inlaid with colored tiles, and a dado round the base to the foot of the principals. The molding above the frieze is surmounted by an iron cresting of floral design, the leaves to curve inward from the cornice. The lighting arrangements of the station are very effective. They were intrusted to the Messrs. Sim and Baril, of Parliament street, London,

and to their patent hydrocarbon process is to be attributed the brilliant light obtained, while a saving of sixty per cent is said to be effected.

In the construction of the station about sixty millions of bricks, 80,000 cubic feet of dressed stone, and many thousand feet of glass and timber have been used. Over 9,000 tons of ironwork have been employed, the weight of some of the principal portions of which are given as follows:

	Tons.
Main-floor girders.....	590
Intermediate.....	390
Cross-girders of floor.....	1,020
Buckled plates.....	820
Main roof, ribs, and spandrel framing.....	1,270
Intermediate ribs.....	320
Purlins and connections between ribs.....	230
Cast-iron columns and caps below flooring.....	1,080

The travelling stage and hoisting gear, by means of which the ribs and roofing were erected, were very ingeniously designed by J. G. N. Alleyne, of the Butterley Iron-works. The principle on which he acted was never to lose hold of the main rib until the wind ties were finally fixed to the walls. The staging was divided into three sections, the centre consisting of six divisions, the side ones of five divisions each, and from front to rear there were four divisions. The standards consisted of die-square backs of timber, 12 inches square; the horizontal traverse pieces were double 12 inches by 6 inches each, except the lower one, which was 12 inches square, with iron shoes bolted down to receive the feet of the standards and braces. These were connected by cross braces, and the whole was moved, either together or separately, on 123 wheels, each 2 feet 8 inches in diameter, turning on a balk of timber 18 inches square. A large hotel is being constructed at the end of the station.—*Scientific American.*

GENERAL NEWS. CANADA.

Cranberries picked on Sable Island form a regular trade at Halifax. Ninety barrels arrived by a steamer last week, and were sold for an average of \$7 per barrel at public auction.

A fine specimen of the bald-headed eagle, very rarely to be seen now, was shot in the village of Wyoming a few days ago by Mr. Thos. Sanderson. The wings, when extended, measured seven feet from tip to tip.

The Bruce County Council has confirmed the by-law appropriating \$250,000 as a bonus to the Wellington, Grey and Bruce Railway. This guarantees the construction of the railway, which, in turn, will repay the bonus ten-fold by the advantages it will confer on the County of Bruce.

The *Elora Express* says it knows no more appropriate title for that fatal rod of our thrashing machines, which annually slays and maims its scores of victims, than "Tumbling Rod." During the fall and winter, not a week elapses without our country papers, somewhere or other, being called upon to record a Thrashing Machine Accident, and the bulk of these arise from the exposed position of the Tumbling Rod. This need not be. A little legislation would remedy the evil. A very simple mechanical appliance—a cheap cover—would remove the danger. But legislation must be had to enforce it.

The Fredericton (N. B.) *Farmer* says that within the last few weeks a delegate from the Iroquois Indians of Canada has visited the Lower Provinces, to agitate a confederation of the Six Nations, and the removal of all the tribes to Ontario. A Council of Chiefs will be held at Tobique in January, with this object in view. The advantages held out to Indians in this Province to remove are, better schools and churches, together with a more stringent enforcement of the laws.

Hon. Mr. Fraser's Cheese and Butter Bill, before the Quebec Legislative Council, provides that, whoever shall sell to a butter or cheese factory, skimmed, adulterated or tainted milk, shall be liable to a fine for each offence, of not less than one dollar, nor more than fifty dollars, in the discretion of the Justice of the Peace before whom such offence may be tried. The manufacturer who fraudulently takes cream from the milk sent to the factory, shall also be liable to the same penalty.

BRITISH AND FOREIGN.

The Anti-Papal Council at Naples is reported to be a dead failure.

A "centenary edition" of the Waverley novels, in preparation in England, will contain notes by Scott, which have never before been printed.

The London *Railway News* predicts that in a few years an unbroken journey by rail will be made from London to Peking. The English Channel will be bridged or tunnelled, or ferry boats will take whole trains across.

The Marquis of Westminster, whose income is said to be equal to about £1,000 a day, and is largely increasing every year, has, so we are told, become a member of the racing fraternity in England. This will be joyful news for the "Spiders" of the Turf.

The first ten locomotives ever built in Russia have just been completed at the works of Herr von Struve at Kolonna, near Moscow. It is said that no pecuniary assistance on the part of the Government was required by these gentlemen for this purpose.

The Prussian Lower House have just passed Bills making the validity of marriages exclusively dependent upon registration before the Judge, and introducing trial by jury for all political and press offences. It is thought, however, that this Bill will be rejected by the House of Lords.

Advices received in Havana from the interior of the island denote the prevalence of an alarming state of suffering from famine. The troops under Col. Hidalgo are reported to have found a hut near Palma-Soriano, containing the bodies of eight persons, who had died of starvation.

The London *Times* learns that the Henry-Martini 0.45 inch bore breech-loading rifles, about to be placed in the hands of troops for trial, are in an advanced stage of completion. The ammunition for these experimental arms has been decided on, and is now in course of manufacture in the Royal Laboratory Department, Royal Arsenal, Woolwich. It is the Boxer small-bore breech-loading ammunition, similar in form to that for the service Enfield Snider arms, but having a solid hardened bullet and a powder charge of 85 grains.

A couple of fishermen in their smack, belonging to Langston, Portsmouth, some days since, when about 15 miles from Havre, fell in with the body of a dead whale, which they made their little craft fast to at once, and squared away for the English coast with their prize in tow. The wind was fair, but the whale was heavy, and the distance was considerable for towing such an extraordinary brute as he looked in the water, nor was the sea always very smooth for the purpose, and the result was that it took three days to complete the operation. Then, when the men had stranded their prize at high water on Langston Harbour beach, and saw the whale's great size as the tide ebbed and disclosed his true proportions, the captors had reason to congratulate each other on the pertinacity with which they had stuck to their prize. The whale measures 7½ feet in length, is light skinned, and his mouth is said to be furnished with a splendid stock of "bone." Several parties are in treaty with the fishermen for the purchase of the fish, but the men seem as yet in no hurry to sell, as they are making a good thing out of their dead friend by charging a trifle for showing him.

A Prussian correspondent says: A new breech-loading rifle, invented by one Herr Mayhofer, at Konigsberg, and called *Zundmesser-Gewehr*, is making some noise in this country. At a trial which recently came off in Konigsberg the new gun is said to have fired off 25 rounds per minute with ball cartridge. If all we hear about it is true, the certainty of its aim is as great as the rapidity of its discharges, to which must be added the further advantage of a minimum of smoke being produced. It appears that the peculiarity of the invention is not confined to the gun, but extends to the cartridge. If I am not mistaken, the one as well as the other have been already submitted to this Government, where they are sure to be put to severe tests.

A despatch dated London, Dec. 14, says:—An important Papal Bull has been issued under the seal of strict secrecy, establishing regulations for the Ecumenical Council. In the exordium, His Holiness exhorts the Bishops to live in the practice of charity, humility, sobriety, and pious contemplation during the session of the Council. He declares that although the right of making propositions for the Council belongs only to himself and the court of Rome, *ad nos ad sanctum sedem*, he desires and exhorts every father to think it his duty to make propositions, but on these conditions:—1st. That the propositions be made in writing, and submitted privately to a Council of Bishops named by the Pope; 2nd. That the proposition have for its object the general interests of the Church, not of a particular diocese; 3rd. That it be accompanied by a statement of the motives which have led to its presentation; 4th. That it be conformable to the spirit and traditions of the Catholic Church. His Holiness imposes secrecy on every condition of the conciliary labours. The order of precedence is fixed as follows:—Cardinal Bishops, Cardinal Priests, Cardinal Deacons, Patriarch Primates, Archbishops, Bishops, and abbots general of monastic orders. The fathers are authorized to designate ten of their number to be charged with the judicial settlement of contentions arising among the fathers themselves; the bull appoints the officers of the Council, naming, as a legati or presidents over general congregations, Cardinals De Reisache, De Luca, Rizzero, Billio, and Capolti. Fathers who desire to harmonize the assembly must obtain an authorization from the legati the evening preceding the day on which they intend to speak; those who intend to propose Canons must first submit them to one of the four commissioners on faith, discipline, religious orders and oriental affairs. These commissioners will be chosen by the fathers, but each will be presided over by the Pope. The bull prohibits the fathers from absenting themselves before the conclusion of the Council, and authorizes them to reside out of their dioceses during the entire period of the Council. Sessions of the Ecumenical Council have been adjourned until after the Epiphany.

UNITED STATES.

New Orleans and Chicago papers express regret at the presence of armies of unemployed men in the streets of these cities.

A well known citizen of New York offers to give \$50,000 towards forming a vigilance committee to clear the city of the desperadoes now infesting it.

Minnesota farmers feed wheat to their hogs, and California farmers Bartlett pears to their cows. There is most excellent authority for both statements.

One hundred Georgians, principally from the northern part of the State, have been converted to Mormonism, and removed to Utah since last spring. Four elders have been labouring in the State.

A reduction has recently been made in the rates of transmitting figures by the Atlantic cable. Formerly, each figure was charged as a word; now, five figures can be sent as one word.

An enterprising church in Boston is to have a "reporters pew," fitted up with every convenience for the use of newspaper representatives when they visit the church on business, or otherwise.

A bill is about to be introduced into Congress providing that no more treaties shall be made by the Indian agents. Hereafter the red man's affairs will receive the direct attention of Congress.

The Vermont Legislature has passed a law which makes liquor dealers responsible for any damage accruing to either person or property through the conduct of those to whom they sell liquor.

By a party vote of 129 to 42, the House of Representatives at Washington has affirmed a resolution endorsing President Grant's views about a Reciprocity Treaty with Canada being wholly in favour of the British producer.

Large quantities of arms are said to have been shipped from the Fenian headquarters in New York, on Monday last; destination not known.

It is stated that a business alliance has been effected between the French Cable Company, the Franklin, the International, the Pacific and Atlantic, and the New York City Telegraph Companies, by which their interests were consolidated.

A New York despatch says: Father Hyacinthe sailed in the *Persea* for Paris, whence he will immediately proceed to Rome. Several members of the French Benevolent Society and a number of American friends accompanied him to the steamer. He announced his intention of again visiting this country.