



A recent discussion about the height of trees in the forests of Victoria, brings from the Government botanist the statement that he has seen one 525 feet high. The Chief Inspector of Forests measured a fallen one that was 485 feet long.

A San Francisco doctor delivered a lecture before the Cooper Medical College, in which he entered into an eloquent defence of the pun from a medical standpoint. He claimed that it produced laughter, which is antagonistic to nearly all diseases.

Powerful little magnets are now used for the special purpose of extracting iron and steel filings from the eyes and skin of workmen engaged in ironworks. These magnets are of the horse-shoe shape, nickel-plated, with thin rounded poles, only a few millimetres thick.

**MEASURING THE OCEAN WAVES.**—An interesting feat has been accomplished by the Hon. Ralph Abercromby, who has succeeded in measuring the height of ocean waves by floating a sensitive aneroid barometer on the surface, and in gauging their width and velocity by timing their passages with a chronograph. As a result of these experiments he supports Admiral Fitzroy in the conclusion that waves occasionally reach an altitude of sixty feet. The highest wave measured by Mr. Abercromby was 46 feet high, 765 feet from crest to crest, and had a velocity of forty-seven miles per hour.

An interesting novelty in the application of electricity has been introduced on the Southeastern Railway, England. It is an electric reading lamp, situated just over the passenger's head, which can be lighted by the introduction of a penny into the box, and by the pressure of a knob. The light is of five-candle power, and will last for half an hour, at the end of which time it is extinguished automatically. If the light be required for an indefinite period, a penny every half hour will suffice. A special feature of the invention is that, if the instrument is out of order, the penny is not lost, but can be easily recovered.

There has been discovered in the forests of India a strange plant, which possesses to a very high degree astonishing magnetic power. The hand which breaks a leaf from it receives immediately a shock equal to that which is produced by the conductor of an induction coil. At a distance of six metres a magnetic needle is affected by it, and it will be quite deranged if brought near. The energy of this singular influence varies with the hours of the day. All-powerful about 2 o'clock in the afternoon, it is absolutely annulled during the night. At times of storm its intensity augments to striking proportions.

Terra cotta ware that is broken upon a slant, either outward or inward, can be mended by roughening the broken surfaces with a chisel or hammer, then placing the pieces together and pointing them with a mixture made of 20 parts of clean river sand, 2 parts litharge and 1 of lime, made into a thin putty with linseed oil. If the terra cotta is very red, the putty can be coloured with Venetian red. If other colours are desired, yellow ochre or Spanish brown will give the desired shade. Two pieces of stone, brick or similar material can be united with this cement. Sometimes it is used for covering the outside of brick buildings to make them look like stone of different kinds. Used for this purpose, the cement is called mastic.

A paper recently published by M. Denza, an Italian astronomer, treats of the sand showers which occur frequently in Southern Europe. In many parts of the Ligurian Alps and of Lombardy a short time ago, not only vegetation, but the roofs of houses, terraces, etc., were strewn with fine particles of dust after the occurrence of showers. This dust is readily collected. The writer's protracted observation of the phenomenon confirms the opinion already advanced by him, that the sand showers have their origin in the North African deserts, whence they are borne by strong southern gales as far north as the Alps. Two cases observed support this conclusion. About the beginning of May, atmospheric waves of low pressure advanced from West Africa across the Mediterranean to South-west Europe, causing a heavy rain-fall as far north as the British Isles. In Sicily and Piedmont, the showers were mixed with sand; and, in other cases, the foliage was covered with a layer of dust. On May 12, a violent sand-storm raged in the North Sahara, and this was soon followed by sand showers in Northern Italy. The phenomenon is popularly attributed to the effects of the April moon.

### The Calgary and Edmonton Railway.

The first sod of the Calgary and Edmonton Railway was turned at Calgary on Monday, July 21st, by Hon. Mr. Dewdney, amid much enthusiasm on the part of the people. This important event marks a new era in the history of Calgary and the great territory of Alberta. The construction of the Canadian Pacific Railway. The construction of the Calgary and Edmonton Railway is a matter of little less importance so far as the territory of Alberta is concerned, than was the building of the great

transcontinental road. While the Canadian Pacific crossed the territory from east to west, the new railway will open up the country from north to south. There is a grand country awaiting settlement between Calgary and Edmonton, through which the road will pass, while the contemplated southern extension of the road from Calgary to McLeod will also be through an excellent country. The entire region north and south is a country where stock-raising, farming, dairying, etc., should reach the climax of perfection, while the territory is not without mineral and timber wealth, there being great opportunities in both of these industries. The road from Calgary to Edmonton will at once become the highway to the great Peace River country, and along this highway in time will flow the great commerce which will eventually be built up in these vast northern regions. It is to be hoped that the flourishing young city of Calgary and the rich territory of Alberta will gain every expected advantage from the construction of this railway. The business men of Calgary have worked hard for the road, and they are to be congratulated upon the movement now made to carry out their desires. The people of Edmonton and northern Alberta generally are also to be congratulated upon the fact that their isolation will soon be broken. Those who had the courage to go into these northern regions with the belief that the value of the country would soon attract settlement and bring in a railway to them, will soon have their hopes realized. Flourishing settlements will grow up all along the line of the railway, and general development may be expected to follow the building of the road.—*Commercial* (Winnipeg), July 28.

### Canada in 1844.

The Canada that met my view when I first sailed up the St. Lawrence was little advanced and sparsely peopled. Shortly before my visit Lower and Upper Canada had been united as one province, having two parts—Canada East and Canada West. There was little intimacy between those parts; but the province was one, as having one administration and one parliament. The Governor was also Governor-General of British North America; but in peace this was an honorary distinction. The region below Quebec made the same impression that it does now. There were the same lines of whitewashed houses, parish churches, with roofs of glittering tin, and the same abundance of coasting craft laden with fish, staves, or sawn timber. This is the most unprogressive district of the country, and though the Grand Trunk now runs along the south shore for more than 100 miles below Quebec, and many more steamers ply than at the time of which I speak, the *tout ensemble* is really unchanged.

Quebec, too, was as it is to-day, indeed, rather more important, both as a commercial depot and military stronghold. The trade was in great prosperity; and as vessels of large burden could not reach Montreal, Quebec held large stocks of imported goods, which were forwarded in barges to Montreal, and thence despatched farther into the interior. The citadel was occupied by the Royal Artillery, and two regiments of foot.

Montreal was a city of about 50,000 inhabitants, many of whom lived in long straggling suburbs, of small wooden houses. Its fine river wall and excellent wharves were already constructed, and gave to Montreal, then as now, a striking superiority over Quebec; but there was no canal to connect the harbour with the navigable waters above; there were no railways; there were no bridges; no university, not even a high school; and no manufactures. Nevertheless, Montreal was then the chief seat of commerce and banking. Mr. Moffatt and Mr. Peter McGill were at the head of the mercantile community, and as fine specimens of the honourable British merchant as one could wish to see. The trade was the import of groceries and manufactured goods from Great Britain and sugar from the West Indies; the export of wheat, flour, pearlsh, butter and aed pork, bought in the interior, and shipped by them to Liverpool, Glasgow, and London, on advances by their correspondents. Montreal, like Quebec, had a garrison of British troops. The route from Montreal to the West was one of considerable difficulty. A passenger from Montreal to Toronto made his start in a heavy lumbering coach, which conveyed him eight miles to Lachine. There he embarked on a small steamboat, which took him to the Cascades. At this place he took a coach for about twelve miles; then another steamer. Again a coach, or an open wagon, when the roads became almost impassable, and again a steamboat; till on the afternoon of the second day the passenger, with jaded limbs and battered luggage, arrived at Kingston, the seat of government. This so-called city had about 11,000 inhabitants, and contained few buildings of any size. But it had an active business, chiefly in transhipment of cargoes from and for Lake Ontario. It was also the military headquarters for Canada West, and held a garrison second only to that of Quebec. Fortifications were in progress.

At Kingston the traveller westward embarked on a steamboat of stronger build than those which had conveyed him up the river, because compelled to buffet the often stormy waters of Lake Ontario. Skirting the Canadian shore, and calling at several ports, he reached Toronto in about fifteen hours. This town was the old capital of Upper Canada, now the capital of Ontario. At the time we speak of it had only about 22,000 inhabitants. The harbour could never be an inferior one, but there were only a few shabby wooden wharves. The town had but one important street—King street, across which ran roads at right

angles, irregularly built. Toronto, however, had a manifest destiny to increase, having the support of a rich agricultural region, as well as an excellent position for commanding the traffic of the west. It also possessed educational institutions superior to those of any other Canadian town; although the principal institutions were under a close ecclesiastical influence; and the great emancipation of public instruction from such control had not then been achieved.

Westward of Toronto stretched a sparsely settled region, with many small towns or ambitious villages. Hamilton was a place of wide roads and spaces, and a population of 9,000. Dundas, St. Catharines, Galt, Guelph, Brantford, Woodstock, London, and Chatham, were small towns, connected by roads unblest of Macadam; dreary tracks of mud, patched with what was called "corduroy," or logs laid across the worst places; roads over which even the royal mail could not make better speed than five miles an hour. It was easy to foresee, however, the future prosperity of this fertile district. Its annual yield of wheat was wonderful, and its mills turned out vast quantities of flour for shipment to old England. The route westward was available only from May to November. During the remainder of the year navigation was closed by ice, and the traveller was obliged to journey on a sleigh over snow roads and frozen waters. The only piece of railway was from Laprairie to St. Johns, on Lake Champlain, to facilitate travel from Montreal to the United States. The only public works of any consequence were the Welland Canal, connecting Lakes Ontario and Erie; and the Rideau Canal, connecting Ontario with the Ottawa—leaving the former at Kingston and entering the latter at Bytown, then quite a small town supported by the lumber trade, now transformed into the capital of the Dominion. The political atmosphere of Canada, ever since I have known it, has been keen. At the period to which I revert the two provinces had been but recently united. There was little sympathy between them—the one being British and Protestant, the other French and Roman Catholic. Legislation could seldom be applied to the whole country. Indeed it was not easy for the legislators to understand each other, the debates being indiscriminately in French and English. The Governor-General was Sir C. Bagot, who had succeeded Lord Sydenham. Sir Charles was followed by Sir Charles, afterwards Lord Metcalfe, in whose days the seat of Government was removed to Montreal. Political feeling ran high, and a strong agitation spread on the subject of responsible government, or the transfer to Canada of the British system, instead of the old Colonial Office régime. The political leaders of that period are now dead: Draper and Viger on the one side, Baldwin and Lafontaine on the other. Sir Allan McNab was with the Draper party. John A. Macdonald, of Kingston, and John Hillyard Cameron, of Toronto, were just beginning to be known. Sir George Cartier and Mr. Cauchon were two Canadian lawyers entering on political life as supporters of Lafontaine. Sir Francis Hincks edited a newspaper in Montreal, and he and the late Judge Drummond were favourites with the Irish. George Brown had but arrived in Canada, and was engaged with his father on a newspaper in Toronto. The present Chief Justice Dorion, of Quebec, and Mr. Mackenzie, ex-Prime Minister of the Dominion, had not yet become public men. McGee did not arrive in Canada for a good many years after the date I indicate. Sir John Rose was just called to the Bar, and sprung into large practice; but many years passed before he went into parliament and took a seat in the Government. Sir Alexander Galt was sitting at a desk in the office of the British American Land Company; and men like Sir D. L. McPherson, Holton and Young were busy merchants; none of these gentlemen having given any sign of the active part they were to take in public affairs. But the increasing range of political questions soon drew in all these and other men. Responsible Government was firmly established; the Clergy Reserves were secularized and all shadow of a Church Establishment removed; the seigniorial tenure altered; public education in the West put on a very efficient footing; and great public works—canals and railways—were established.

The Maritime Provinces had in those days little connection with Canada. They had the parallel political and commercial questions, but there was little knowledge of these beyond their own borders. A single mail steamer—the Unicorn—plied during the time of open navigation between Quebec and Halifax; and a traffic in provisions between Quebec and the Lower Ports was carried on in petty schooners, but long years passed before the great idea of federating the provinces took hold of the public mind.

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### Perfumed Linen.

Everything is perfumed save the handkerchief. Custom stamps a scented handkerchief as vulgar. If you wish your linen to have a particularly fresh, wholesome, old-fashioned odour, buy one of those lavender bags now in the market. They are filled with the crushed lavender flowers, and the pungent odour will last much longer than *poudre sachet*. One cannot imagine the task it is to prepare these bags for the market. I was talking with a girl who does this work, and she told me that when at work she is forced to cover her hair completely, wear gloves, cover her neck carefully and her gown with huge aprons, and even then the fine dust of flowers will fly up, lodge in the eyebrows, ears and nostrils, causing unlimited discomfort. But one-half the world must have the luxurious appointments of the toilet. The other half must prepare them.