

pendence being chiefly placed on voluntary effort and mostly on the benevolence of the religious orders—it will easily be understood that the violent break with old traditions and usages induced by the transfer of Canada to England set all the educational arrangements at sixes and sevens. The suppression of the Jesuits both by the Pope and the Crown of England, did away with the most important aid to public instruction among King George's "new subjects." For years there was much debate, but nothing was done. The commission of Lord Dorchester revealed the urgent need of common schools. It was represented to the authorities that the Jesuits' Estates, having been designed for the promotion of education, they should be restored to their original purpose. Promises were given, but for a long time no action was taken. Many attempts at school legislation were made during the first third of the present century. In "Old and New Canada" there is an interesting sketch of the services of the public-spirited Joseph François Perrault to the cause of educational reform. It was to private initiative, indeed, the people had mainly to look for whatever educational advantages were accessible for the three-quarters of a century after the cession of Canada to England. Demand generally provokes supply. So we find that the upper classes had good schools at their disposal. Quebec, Montreal, and, after the Loyalist settlement, Upper Canada, had classical schools, taught mostly by clergymen. In the Maritime Province like provision was made for the wealthy. Nova Scotia can boast of the oldest university—King's College, Windsor, having been founded in 1788. A university was also projected for York, of which Dr. Strachan (afterwards Bishop of Toronto) was to have been the head.

But it was only by slow degrees that the necessity of providing some scheme of public instruction by which the whole mass of the population would benefit was brought home to both the people and their rulers. Upper Canada, it is true, passed a Common School Act as early as 1816, but it was not till long after that the first signs of the present efficient administration began to show themselves in any of the provinces. Of discussion there was enough and more than enough, the Jesuits' Estates coming in now and then for a share of it. The union of the Canadas made some compromise necessary on the question of religious instruction. The measure proved unsatisfactory for several reasons, and in a few years it was repealed. The story of educational progress in this province during the first fourteen years of the union régime is told very fully in his "Mémoire" by the late Dr. Meilleur, Superintendent of Education during that period, while his successor, the Hon. Mr. Chauveau, has, in his "Instruction Publique," long since a standing authority in Europe as well as America, covered the whole range of educational history in all the provinces. It was not until the year 1855 that the Separate Schools question was finally set at rest in Ontario. In this province it never reached so sharp a pitch of wrangling as that which characterized the correspondence between the late Dr. Ryerson and the Roman Catholic Bishops. Once this burning question was disposed of, it was generally conceded that the educational system of Canada was equal to any that the civilizations of the Old World had developed. Both the Rev. Dr. Ryerson and the Hon. Mr. Chauveau visited Europe several times to inspect the educa-

tional departments of France, Germany and Great Britain, and both gentlemen have left ample records of their tours and the results attained. After the passage of the British North America Act, each province was entrusted with the charge of its own educational interests. In 1871 the the New Brunswick Legislature passed an Education Act, which swept away all provision for separate schools on the ground of religion. The protests of the minority proving of no avail, appeal was made to the Dominion Government, and thus the question was removed to the stage of Dominion politics. But it was decided that the matter lay within the jurisdiction of the local legislature.

The policy of the Manitoba Government renews the agitation of this vexed problem in a portion of the Dominion where not long since such a controversy would have been the last thing looked for. In no part of Canada—of the world, indeed—had conflicts of religious opinion proved so susceptible of reconciliation through moderation and mutual forbearance as in the prairie province. Its school law was praised in England as marked by good sense, and its university was cited again and again as evidence of what could be accomplished for the maintenance of good will and the highest advantage of the public when persons of different creeds came together—not to sacrifice any cherished convictions—but to ascertain on what points they could honestly and fruitfully agree. The act, which though repeatedly modified in successive years, is the basis of the system, was passed in the first session of the Provincial Legislature in 1871. It appointed one Board of Education, with two sections, each having a superintendent of its own. Save in this last feature, its model was the Quebec school law. The university, with its Roman Catholic, Anglican and Presbyterian colleges, was pronounced by an English review a marvel of conciliation. In a "Mémoire" (in French) prepared for the Colonial Exhibition of 1887, the writer states that the utmost harmony prevails between the two sections; and the author of the Protestant report is equally emphatic in directing attention to the "almost entire absence of the friction and disagreement that have marked the progress of education in some of the sister provinces." Nor, till a few months ago, did we hear of any change in these harmonious relations between the two sections. But the fiat has gone forth and, for good or evil, the North-West is about to follow the example of New Brunswick.

#### THE POST-CARD SYSTEM.

It is not many years since the post-card came into use, yet it has become all over Europe and this continent a very common means of communication. On the other side of the line, it is said, over 100,000,000 cards are used a year. Each country has a style of card peculiar to itself, and each has its formula as to where the address is to be written. This has given rise at times to a good deal of discussion among grammarians and newspaper writers. As a matter of curiosity the various legends may here be noted: Canada: "The address to be written on this side." United States: "Nothing but the address to be on this side." England: "The address only to be written on this side." France: "This side is exclusively reserved for the address." Germany: "Only for the address." Spain: "On this side is written only the address (foreign). What is to be written will be done on the opposite side, and will go signed by the sender (home)." Switzerland: "Only for the address (in German). Side reserved for the address in Italian and French." Italy: "N.B. On this side nothing is to be written save the address only." Sweden: "This side reserved for the address." Denmark: "On this side write only the address." Russia: "This side reserved especially for the address." Holland: "Side reserved for address." Hungary, Belgium and a few other countries make no specifications, but throw out unequivocal hints that you "must write only the address on this side."



Mr. Edison claims that he is already on the track of the secret which will directly convert an original equivalent in nature, such as coal, into power without the mediation of the dynamo. If he succeeds,—and he has achieved problems which looked at one time but little less startling,—it may become a revolution as great as that effected by James Watt, and make a new departure in the construction and development of the ocean liner.

A welcome addition has just been made to the Zoological Society's collection of living animals in the shape of a fine young female Burchell's zebra (*Equus Burchelli*). The society had already a pair of the much rarer true zebra (*Equus zebra*). This recent acquisition gives them a pair of the first-named species also. In a very few years under the quickly advancing tide of immigration, both these beautiful representatives of the horse tribe will be utterly extinct in Africa.

Prof. Hartley, of London, has been trying to find out why the sky is blue. His experiments show that the colour arises from the action of ozone upon the rays of light. The results of his examination of ozoned air go to prove that it is impossible for rays of light to pass through so little as five miles of air without the rays being coloured sky-blue by the ozone commonly present, and "that the blue of objects viewed on a clear day at greater distances up to thirty-five or fifty miles must be almost entirely the blueness of the ozone in the air." In his laboratory experiments, he observed that the quantity of ozone giving a full sky-blue in a tube only two feet in length is two and a half milligrammes in each square centimetre of sectional area in the tube.

A new process of hardening plaster, so as to make it available for the construction of floors in place of wood, has been brought before the French Academy of Science by M. Julte. A mixture of six parts of plaster of good quality and one part of finely sifted, recently slaked white lime is employed like ordinary plaster. After it has become thoroughly dry, the object manufactured from it is saturated with a solution or any sulphate whatever whose base is precipitated in an insoluble form by lime. The sulphates specially recommended for the purpose are those of iron and zinc. In order to obtain the maximum of hardness and tenacity, it is necessary to temper the limed plaster well in as brief a space of time as possible, and with no more water than is strictly necessary.

The Ceylon papers announce the death of an elephant named Sella, which had served the Public Works Department for over 65 years, and had worked in various parts of the island under different circumstances for an unknown period. Originally Sella belonged to the last of the Kings of Kandy, Sri Wickrema Raja Singha, and was one of about 100 elephants which passed to the British Government in 1815, when the Kandyan dynasty was overthrown and the whole island passed under British rule. It was supposed that Stella was 15 years of age at this time, but this is surmise. His two friends, with which he usually worked, and which fell to the Government at the same time, died 25 years ago. In 1880 it was decided to sell all the elephants belonging to the Public Works Department, and Sella fell to a well-known resident of Colombo, Mr. de Soysa. The animal was a tusker, very docile, and worked steadily all his life. It aided in several *keedah* operations for the capture and taming of wild elephants, but became totally blind about three years ago. Notwithstanding this, he continued to work at the plough until within a short time of his death. After death the tusks were removed and measured five feet in length, the height of the animal being eight feet. He was well-known to successive generations of British residents in Colombo.

DELTA.—Of the formation of a delta an admirable instance is offered to us in the Lake of Geneva. At the upper end of the lake the Rhone enters discoloured by mud; but when it leaves the lake its waters are a transparent blue—the mud has been deposited in the lake. As this has been going on for centuries we may expect to find some evidence of the work of the river. This is given us in the alluvial tract which stretches from the head of the lake for some six or seven miles. It is a marshy plain, higher than the level of the water, and occupying what was once the bed of the lake. If this state of things continues the Rhone will entirely fill up the lake. The rate of the advance of the delta may be gathered from the fact that the Roman town, Portus Valesia, which stood on the margin of the lake, is now more than a mile and a half inland, the river having added to its delta this quantity in about eight centuries. The delta of the Mississippi has an area of 12,300 square miles. The river brings down 1-1321 of its weight of solid matter, or more than 6,000,000,000 cubic feet annually; yet such is the vast size of the delta that Sir Charles Lyell computes it has been in the course of formation for 33,500. The Ganges performs even a greater work of transportation. In the four rainy months, at 500 miles from its mouth, it was found to bear seawards 577 cubic feet of solid matter a second! Its annual discharge has been computed to be 6,368,077,440 cubic feet—an amount of matter equal in weight to sixty Great Pyramids of Egypt, although the base of that immense pile covers eleven acres, and its apex is 500 feet above the level of the plain.