

Superior, opposite Mishmacotton Island, about 160 miles below Silver Island. The tin is pure, imbedded in quartz and large veins. Lumps of pure tin, weighing several pounds, were found upon the surface.

NOVA SCOTIA COAL.—There has arisen a remarkable demand for Nova Scotia coal. Statistics are published in a Lower Province paper, showing that in one week, ending September 28th, 4,241 tons of coal were shipped from Preston in 57 vessels, to various points in the old and new world.

THE PROPOSED NEW RAILWAY AT QUEENSTON.—The committees appointed by the Town Council and Board of Trade of St. Catharines lately visited Hamilton to confer with the Directors of the Great Western Railway in reference to the proposed railway from Queenston through St. Catharines.

HARBOR IMPROVEMENTS AT KINGSTON.—The projected harbor improvements at Kingston, for which an appropriation of \$100,000 has been made by the Government, are to be commenced immediately. Mr. Douglas, of the Public Works Department, has been sent to Kingston to superintend the works of the improvements.

CANADA PACIFIC RAILWAY.—It is said that Sir Hugh Allan has secured the contract for constructing the Canada Pacific Railway, and that he will proceed at once to England to negotiate for the necessary funds.

RICH STRIKE OF SILVER ORE.—The Windsor Record is informed that the North Shore Silver Mining Company have struck rich silver ore at a depth of only eight feet from the surface, which will produce \$50 of silver to the ton.

OTTAWA.—An Ottawa paper says:—"It is estimated by Mr. Willis, Immigration Agent at this city, that the population of Ottawa and Hull has been increased at least two thousand by immigration this spring."

NEW STEAMERS.—Two splendid steamers have been acquired by the St. Lawrence Towboat Company, and will be put on the Saguenay route next season, making it a daily line.

MORE IMMIGRANTS.—Within the past three weeks 150 immigrants arrived at Montreal, most of whom have found good employment.

Miscellaneous.

THE NATURE AND PRESERVATION OF TIMBER.

The best timber is that which has grown slowly, on soil rather dry than moist, and is compact and heavy, the annual rings being thin and uniform, showing a hard, clear surface when cut and not a dull or chalky one, free from clefts or radical cracks, and from cupshakers or cracks between the annual layers. Timber is best when cut at or near the maturity of the tree, as a young tree has too much sapwood, and an old one is likely to get hard and brittle at the core. Probably fifty years is the least and one hundred years the greatest age at which the ordinary kinds of wood should be cut. The best seasons for felling is when the sap is quiet, or in midsummer and midwinter. Timber exposed freely to the air in a dry place, sheltered from the sun and rain, requires two years and upwards, according to the size, to become well seasoned. A small part, however, of the material put into our public works receives sufficient treatment in this respect, and hence the short life of the majority of these structures. Artificial seasoning is effected by exposing the material, properly piled in a suitable building, to a current of hot air. Timber loses in drying from 15 to 30 per cent. of its weight, and shrinks across the grain from 2 to 5 per cent. Wood lasts longest when kept dry and well ventilated. When kept constantly wet it is somewhat softened, and will not resist so much, but it does not decay. Piles placed in the Rhine nearly 2,000 years ago have been found quite sound during the present century, and the roof timbers of some of the older Italian churches are still in good condition. Many highway bridges in this country are apparently uninjured by from 40 to 50 years' use; the railway bridges, made of good material and carefully protected, have been in service for twenty years, and are yet in good order.

Wood decays the fastest when alternately wet and dry, or when subjected to a hot, moist, close atmosphere. Thorough seasoning, protection from the sun and rain, and the free circulation of air, are the essentials to the preservation of timber. Oil paint will protect wood from moisture from without, but unless it is perfectly dry when

painted, the moisture within will be unable to escape, and will cause decay. Several different methods of preservation are now in use, consisting of an injection of different chemical preparations into the pores. Chapman's process employs sulphate of iron (copperas); Kyan's process, corrosive sublimate (bichloride of mercury); Bennett's process, chloride of zinc; Boucherie's method, sulphate of copper; and Mr. Bethnell saturates the timber with creosote. In these several operations the air is exhausted from the tank in which the timber is placed, and the sap drawn out from the pores, and the solution forced in.

The woody fibre is seen by the microscope to consist of long, slender tubes, upon the tenacity of which depends the tensile strength of the timber. The lateral adhesion or the strength across the grain depends upon the adhesion of the sides of the tubes. The pines, or cone-bearing trees, have a straight and regular fibre, and are well adapted to direct tensile strains; but the lateral adhesion is small, so that they are split along the grain, and much less suitable to resist the shearing endwise, or sliding of the fibres on each other, than the hard woods.—*Ex.*

IMMIGRATION INTO CANADA.

Under the above heading the New York Herald makes the following remarks upon the progress of Canada in material prosperity:—"We think our northern neighbors slow. So they are, if we contrast their history with ours for the past century. Still, the statistics show that during the last decade Canada has received by immigration an addition of more than forty per cent to her population, and during the last thirty-three years more than twice doubled her number of inhabitants, counting now two and a-half millions, against half a million a third of a century ago. As our population exceeds that of the Canadian Dominion by more than ten-fold, it is natural for us to look upon her growth as insignificant. Yet, since the breaking out of our late war, she has gained at a more rapid proportionate rate than we have, our increment of population having been thirty-five per cent. As Canada has three hundred and fifty thousand square miles of territory, being equal in extent to Great Britain, France and Prussia, or six times the size of England and Wales, she has as yet only ten persons for each six hundred and forty acres of land. Consequently, she has abundance of room for all who may come to find homes upon her fertile soil, or to win fortune from the abundant facilities she offers for profitable commercial or industrial enterprise. Should she continue to grow at her present rate till the end of this century, she will then have a population of twenty millions, or about half our present number. Though events do not move with a rush so rapidly beyond our northern frontier as on this side of it, Canada has vast enterprises which mark her population as embracing the same elements of thrift which are developing our own greatness. Her great rivers and excellent harbors, her canals and railways, when completed, will offer to the product of her fields, forests and mines easy means of export, while her rapidly growing and prosperous population will furnish abundant consumers for the fabrics with which Europe balances the traffic. It cannot be doubted that for British subjects who wish to escape the over-crowding and excessive competition in all industrial and commercial pursuits 'at home,' and who hesitate about trying our experiment of self-government, Canada offers abundant hope for an improved condition, and it is fair to believe that for several decades she will receive a constant and liberal flow of immigration, and that the two English-speaking nations must control the destinies of North America. If, in time, Canada wishes to take her place in the constellation of stars upon our banner of freedom, we hold ourselves ready to comply with the dictates of 'manifest destiny.' Should she prefer to stay out of the Union, we shall still be true friends, generous rivals, and good neighbors. Her prosperity will only stimulate ours."

HOW TO DRIVE RATS AWAY WITHOUT POISON.

We know of three methods:—First, the old French plan; this is followed chiefly in Paris by men who make it a special business. They take a deep tub with water on the bottom, and a little elevation in the middle, like an island, on which is only place for just one rat to sit on. The top is covered, and a large balanced valve, opening downward, on the middle of this valve a piece of fried pork or cheese is placed; when a rat walks on it to get the cheese, the valve goes down, drops the rat into the water, and moves back in position. A road is made from a rat-hole to the top of the tub, by means of a piece of board rubbed with cheese, so as to make the walk attractive for the rats. In the course of a single night some ten, twenty, or even more rats may go down, and if the island was not there they would be found most all alive in the morning, quietly swimming round; but the provision of the little kindness saves the trouble of killing them, for their egotistic instinct for self-preservation causes them to fight for the exclusive possession of the island, on which in the morning the strongest rat is found in solitary possession, all the others being killed and drowned around him. Second, the New York plan invented by one of our friends. The floor near the rat hole is covered with a thin layer of a moist caustic potassa. When the rats walk on this it makes their feet sore; these they lick with their tongue, which makes their mouths sore; and the result is, that they shun this locality, not alone, but appear to tell all the rats in the neighborhood about it, and eventually the house is entirely abandoned by them, notwithstanding the houses around may be full of rats. Third, the Dutch method. This is said to be used successfully in Holland; we have, however, never tried it. A number of rats are left together to themselves in a very large trap or cage, with no food what ever; their craving hunger will cause them to fight, and the weakest will be eaten by the strongest. After a short time the fight is renewed, and the next weakest is the victim, and so it goes on till one strong rat is left. When this one has eaten the last remains of any of the others, it is at loose; the animal has now acquired such a taste for rat-flesh that he is the terror of rats, going round seeking what rat he can devour. In an incredibly short time the premises are abandoned by all other rats, which will not come back before the cannibal rat has left or died.—*Manufacturer and Builder.*

A SIMPLE REMEDY FOR DANDRUFF.

There are, doubtless, few persons, especially among gentlemen, who do not suffer from the inconvenience of dandruff. Physicians do not consider it of sufficient importance to engage their attention, and the poor victims are left to practice their endurance, or, for a cure, to try some of the many nostrums advertised in the public prints. The intolerable itching which accompanies the troublesome complaint is not the only unpleasant feature; as to persons of any pretensions to neatness, the appearance of the white scales on the coat collar and shoulders is very objectionable. The writer, during a number of years, tried the different alcoholic solutions of castor oil, and many other preparations, without permanent benefit, and as a last resort was led to adopt the plan of cleaning the scalp with borax and carb. potassa. This proved effectual, but after a persistent treatment of some months, the hair became sensibly thinner, and perhaps would have soon disappeared altogether. The belief that dandruff arises from a disease of the skin, although physicians do not seem to agree on this point, and the knowledge that the use of sulphur is frequently attended with very happy results in such diseases, induced me to try it in my own case. A preparation of one ounce of flour of sulphur and one quart of water was made. The clear liquid was poured off after the mixture had been repeatedly agitated during an interval of a few hours, and the head was saturated with this every morning. In a few weeks every trace of dandruff had disappeared, the hair became soft and glossy, and now, after a discontinuance of this treatment for 18 months, there is no indication of the return of the disease. I do not pretend to explain the *modus operandi* of the treatment, for it is well known that sublimed sulphur is almost wholly insoluble, and the liquid used was destitute of taste, color or smell. The effect speaks for itself.—*Journal of Pharmacy.*

MAKING AND REPAIRING THE ROADS.

A writer in the *Colonial Farmer*, Fredericton, N.B., proposes a change in the whole administration of the keeping in repair the roads of the Province. We doubt not some of the farmers of Ontario, who complain of being mud-bound in the fall and spring, would wish for some change to improve the roads in their vicinity. The writer thus speaks of the cost at present of their road-making, and proposes a change in the management:—"It is often the boast of those who write of the attractions New Brunswick offers to intending emigrants, that no settled portion of our Province is without its good highway road kept in repair at public expense and free to all who use it; and it is true that large sums of money have been and are annually expended upon our

roads and bridges. The annual grant for this purpose is about \$175,000; the statute labor amounts to about \$160,000, making \$335,000 the total amount expended upon roads and bridges. It will scarcely be claimed that this large sum of one-third of a million is in all cases wisely and carefully expended. As a means of attaining this desirable end (employing those who are best qualified for the work), I would suggest that the following changes be made in the law:

1. That each county be charged with the maintenance and repair of the roads and bridges within its limits, so as to render it liable for all damages resulting to travellers or their conveyances by reason of the neglect of this duty.
2. That an officer of road commissioners be established for each county, with a fixed salary, without commission; the duty of the incumbent to be the expenditure of the road money from whatever source derived.
3. That statute labor be abolished, and a money tax substituted.
4. That the offices of Supervisors of great roads, bye-roads, commissioners, and Surveyor of roads be abolished.

THE ENGLISH HARVEST.

The following statement is from returns collected at the office of the London *Agricultural Gazette*:—"Of 262 reports on the wheat crop, 135 state it to be an average crop, 98 put it at low, and 29 above an average. Of the 255 barley reports, 111 pronounce it to be an average, 95 below, and 49 above an average. Of the 262 returns of the oats, 129 declare it to be an average, 26 below, and 107 above an average. Of the 186 returns of the bean crop, 94 put it at an average, 9 below, and 83 above an average; and of the 181 reports of the pea crop, 100 put it at an average, 38 below, and 49 above an average. The pea crop also is unusually good. Wheat, on the other hand, must be pronounced decidedly below an average crop on the whole, and barley as an average."

IRON RUST ON WHITE GOODS.

A remedy tried and found effectual, is this:—One ounce of oxalic acid dissolved in one quart of water. Wet the iron rust spots in this solution and lay in the hot sun; the rust will disappear in from three to twenty minutes according to its depth. By holding the cloth, wet in this solution, over the steam of a boiling tea-kettle, the rust disappeared almost instantly. In either case, the cloth should be well rinsed in water as soon as the rust disappears, to prevent injury from the acid. Many use this acid to remove fruit and ink stains from the white fabrics. When diluted still more, it may be used to remove fruit stains from the hands.

LUCK AND PROFIT.

Under this heading, a writer in the *Bee-keeper's Journal* advises bee-keepers as follows:—"I desire to tell bee-keepers how to have luck and profit in the apiary. Have your hives placed so that you can get to the rear of them, and then never let the grass grow there. You must tramp it out, however, and while you are doing this, work with the bees. Work intelligently, guided by some good journal, and a good work on the subject. I winter in double rows, with a space of two inches between walls, which is filled with straw. I have wintered this way for two years with perfect success."

BENEFIT OF RAILWAYS.

The following from an impartial Toronto paper, is regarding the benefit railways may be to a country at large:—"As an illustration of the advantage of railway communication, it is mentioned that from the township of Uxbridge and immediate neighbourhood about seventeen thousand cords of wood were sold, at an advance of two dollars per cord on the price previously obtainable. Here is \$34,000 realized on a single article at one station of the Nipissing railway during one year. This fact is worth a dozen arguments to show how railways benefit the country."

COAL AND PEAT.

Coal has risen so much in price in Britain that there is a strong agitation getting in favour of using peat, and setting rangers and criminals to dig in large quantities. The supply, it is said, is in Scotland and Ireland unlimited. We heard a great deal about peat companies in Canada a year or two ago, and the possibility of \$3 a ton, quite equal in heating power to a cord and a half of wood. What has become of the project? Has it gone to join many other unrealized projects? Coal and wood are still dear enough in Canada to encourage, one would think, such competition.

CANADA THISTLES.

The board of supervisors of a county in Illinois appointed a committee on Canada thistles, to collect all the information possible in regard to that weed, and report. They solicit facts on the following points:—1st. Give township section, and owner of farm on which Canada thistles are growing, or have been, and destroyed. 2nd. Where and how and from what place imported. 3rd. Present space of land occupied. 4th. How they have been killed out after being thoroughly rooted.

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