

**A CANADIAN SCHOOL OF FORESTRY.**

The Toronto *Globe's* London correspondent says:—Some renewed discussion has taken place here recently of Prof. Fream's suggestion to the effect that an Anglo-Canadian Forest School might be established with advantage. Professor Fream's proposition, it may be remembered, was that with aid from the Imperial treasury the Canadian Government might establish a Forest School, which would not only be a great benefit in promoting forest preservation in Canada, but would also prove extremely serviceable as a means of training for English students in forestry. Several communications on the subject have appeared in *The Canada Gazette*, and these have now been supplemented by editorial reference in *Forestry*, the medium for the consideration of such matters in this country. The present time is in ways specially opportune for action on the part of the Dominion Government. The Select Committee, nominated last year by the House of Commons, report upon the desirability of establishing Imperial schools of forestry, will very shortly be re-appointed, and the whole subject will before long be brought prominently under the notice of the Imperial authorities. Prof. Fream proposes that the Canadian Government should take the matter in hand at once by securing the services of one or two thoroughly trained practical foresters who might act as inspectors in the suggested school, and to whose care the management of large areas of forest land might be entrusted. In this way the valuable efforts of the Ontario Government to promote forest preservation would be most usefully and fittingly supplemented, and Canada presents such exceptional advantages over the old country for silviculture that a very strong case could unquestionably be made out for Imperial support. *Forestry* commends the proposal, and expresses the hope that some action in this direction may shortly be taken. Cannot the matter be effectively brought under the notice of the Dominion authorities during the present session of Parliament? If their views were ascertained, and were found to be in any degree favorable to the suggestion, reports could then be made to the Imperial Government.

**TIMBER FOR CAR BUILDING.**

The effect of the increased activity in car building upon the prices of lumber used for sills, says an exchange, is significant as an indication of a future scarcity and a permanent advance in prices. It is true that during the past three years railroads have, as a matter of economy, made their old car equipments last as long as possible without incurring the expense of renewals. The time, however, has come when the old stock must be replenished to meet the requirements of existing traffic, to say nothing of any prospective increase of traffic which is likely to attend a general revival in business. The simultaneous demand for new cars for a large number of roads that have been starving their stock may give a stimulus to the lumber market that may turn out to be merely temporary, to be followed by easier prices as soon as the stock at the yards shall be increased to meet the demands.

This, however, remains to be seen. Certain it is that the sources of supply of the most desirable timber in the construction of cars are not becoming more abundant or nearer of consumption. White oak was once considered indispensable for sills, truck frames, any part of a car exposed to severe strains, but its growing scarcity and the demand for it and other lines of construction have led to the use of Norway southern yellow pine, of which there is a more abundant supply at less cost. These timbers have of late been extensively used for freight car sills of every kind, especially at the south, and stand the test for service, except for end sills, practically as well as oak. Southern pine that has not had its strength and solidity impaired by tapping, is very stiff and durable. The further south it grows the more resinous, heavy and serviceable it is, and along with Norway pine is likely to be a staple material for car sills as long as the supply lasts and prices are not prohibitive. But even should the increase cost exceed the limits of economy,

as it probably will in the course of time, there are other woods as yet but little used in car work that will become available. Spruce has already been tried, and if the testimony in its favor is reliable it makes excellent sills. Hickory is also spoken of by those who have used it, and there may be other woods, as yet untried, that may be found equally well adapted to the purpose.

Furthermore, there is no telling to what extent timber preserving processes may be developed under the spur of economy. Chemical treatment, it is true, might not add very much to the strength of a sill to resist strains, but moisture might be excluded and decay and rot prevented, which would, of course, prolong the service. Paint is now relied upon to do this and would do it more effectually than it does if it was applied more frequently and thoroughly.

As a last resource, when the forest shall be thinned to the point of extinction, we shall have the ore beds and smelting furnaces to fall back upon, and iron cars will at least become a necessity, their cheapness and durability will be recognized, and the weary waiting of their many sanguine advocates abundantly rewarded. But, we are sorry to say, both cars and advocates must bide their time, which is not yet.

**MICHIGAN LUMBERMEN AND OUR FORESTS.**

Canadians are not generally aware of the extent to which the Michigan lumbermen are securing the best timber limits in the Georgian Bay district. We reprint to-day from the *Detroit Free Press* an interview with Col. Jeffers, a Michigan lumber merchant, in which that gentleman mentions that he has purchased 500,000 acres of timber land in Canada. Col. Jeffers is only one of many Michigan lumbermen who are buying up as rapidly as possible our western forests in order to replace the disappearing Michigan ones.

Of course of Michigan lumbermen choose to pay the necessary price, they cannot be kept from acquiring our lands; but the Government has in its own hands the power of preventing the constant loss to Canada which accrues from the possession of these limits by the Michigan lumber merchants. They all have mills at Saginaw, and as the United States Government does not impose a tax on saw logs, they raft them across Lake Huron, and saw them in Michigan, thus giving to foreigners that employment which should in justice go to our own workmen. Col. Jeffers in his interview said:—

"We propose to bring the logs over and saw them in Michigan. We are Michigan men, and hope to make our purchases inure to the benefit of our people here."

We, in turn, propose that the Canadian Government should spoil the little game of Col. Jeffers and his compatriots by placing heavier export duties on logs. They would then be obliged to either utilize the present Canadian saw mills, or erect new ones. In either case they would have to expend in this country thousands of dollars which at present go towards building up Saginaw. Of course it would be rash to take any action pending the consideration by Congress of the Hewitt Bill, which provides for the removal of the present American duty on sawn lumber, but if that measure should be rejected, the Canadian Parliament should not for a moment hesitate about increasing the export duty on logs. Self-preservation is the first law of nature.—*Ottawa Journal*.

**THE OTTAWA RIVER FLEET.**

The first barge of the season to be loaded is one which commenced receiving a cargo of match blocks at Pattee & Perley's dock yesterday morning for Prince's splint factory at Buckingham Basin. The barge is the John Neville, commanded by Capt. Beaton.

Steamer Allen Gilmour, Capt. Bangs, and tow of six barges will likely load laths at the end of the week at Pronson and Weston's docks.

Steamer George A. Harris and tow of seven barges will take on a cargo of lumber early next week for American ports, at Eddy's, Booth's and Perley & Pattee's.

Steamer E. B. Eddy, Capt. Williamson, and tow of six barges will start to load at the end of the week at E. B. Eddy's wharf.

Messrs. D. Murphy & Co.'s large fleet of 67 barges will begin loading next week for Montreal, Quebec, Whitehall, N. Y., and Burlington.

Steamer Thousand Island Rambler is now being put in readiness and will start ferrying between Hull and Ottawa next Monday.

Steamer Gatineau, of the Merchants' Despatch Line, will load for Montreal at the beginning of next week on the Ottawa river, and proceed to Montreal, returning with a cargo of merchandise destined for this port.

Steamer Ida, Capt. Garrett, which has been being put to a large extent, will be launched from Miller's shipyard early next week, and will go through to Montreal, returning with merchandise and passengers for Ottawa and intermediate ports on the canal between this and Kingston.

Steamer Express, Capt. Mansfield, will commence the ferry service for the season between New Edinburgh and Gatineau Point early next week.

On Monday or Tuesday next the tug Sir John and tow of five barges will load lumber for Oswego.

Steamers Hiram Eaton and Resolute, and steam barges Welshman, Water Lily, and Col. By, with their respective tows of barges, will be ready to lock down light from the canal into the Ottawa river about the 5th of May.

The repairs to the Rideau Canal here are being rapidly pushed forward under the able supervision of Mr. Carrol. It is calculated that it will be ready for traffic the first week in May.—*Journal April 21st*.

**A SAW MILL IN A QUEER PLACE**

Among the old jokes that called in question (very absurdly) Mr. Jefferson's practical sense was one to the effect that he built a saw-mill on the top of a mountain, and had finished it before he thought where the power was to come from or how the logs were to be got to it. One is reminded of this when, in passing westward over the Chesapeake and Ohio Railway, just below Sewel, he casts his eye to the top of the mountain opposite, towering up five or six hundred feet, and sees a saw-mill perched up there, like an eagle upon its eyrie. As of the fly in the amber, he will ask, "how the devil did he get there?" Mr. A. M. Donelson, a Scotchman, conceived the idea. He moved a thirty or more horse power engine on the road to Cotton Hill, and thence around through Fayette, to its wonderful perch. With one or two other engines of less power he is sawing up a large quantity of fine oak and poplar, and transporting it to the Chesapeake and Ohio road. But in what way, is the funny part of it? Should your attention be called to it, otherwise you eye would hardly catch sight of an immense wire cable fastened at or near the mill, and the other end close to the Chesapeake and Ohio road, spanning the awful chasm. Then the timber enclosed in an iron frame is suspended by a swivel to the cable, with a big rope or cable fastened to one end of it and so played out as to regulate the descent, is somewhat the description an intelligent young man on the cars gave me. I should have deemed myself lucky to see a carload in transit. It reminded me of the picture in my geography when an urchin, of a man in Peru or Chili suspended over one of the awful cliffs by a rope hunting for birds eggs.—*Ex.*

**SEASONING TIMBER.**

Though air drying is the best and most certain way of promoting durability in wood without impairing its strength, the time it takes is often a great drawback; hence the immersion of the newly-felled timber is resorted to in order to arrest any tendency to change, by washing out of the pores of the wood all sap and other substances which tend to promote fermentation, and hence decay. Moreover, the soaking in water makes the wood less liable to twist and warp in subsequent drying, and when it is cut up into scantlings for use, besides rendering it more proof against the attacks of worms, though its strength is supposed to be slightly di-

minished thereby, which seems to be borne out by the fact that the loss of weight is greater in waterseasoned wood than when it has been merely air seasoned. If placed in water it is better that it should be completely submerged, as nothing is so injurious to timber as being exposed to alternate wet and dry. The generally received opinion is, that for ordinary purposes a fortnight's immersion in running water is sufficient, though much must depend on the size of the bulks so treated. T. de Lapparent, one of the Government inspectors of timber in France, recommends for timber used in shipbuilding one year's immersion in river water, two years in fresh, or three in brackish water, constantly being changed, to be followed by two years of air-seasoning. The gradual processes of air and water seasoning are the only ones which can be safely applied to timber in large scantlings; still, artificial drying may often be successfully employed in the case of smaller scantlings, more especially in the preparation of timber for joinery, for which purpose it should be quite dry and free from any tendency to shrink.

Amongst such systems we may mention drying in ovens or hot chambers, exposed to currents of air ranging from 90° for hard woods and large sections, to 200° for soft woods in thin boards, the process being carried on until the wood has lost from one-fifth to one-third of its original weight, according to the purpose for which it is required to be used. Boiling and steaming wood for three or four hours are often resorted to, as the subsequent drying is thereby rendered very rapid, and the tendency to shrink and twist is reduced to a minimum, whilst the wood becomes so pliable that ribs and planks can be bent to any required curve, and, if confined until dry, will readily retain the form so given them. Smoke-drying may also be employed at times with advantage; but carbonising or charring the outer surfaces of the wood, though very effectual in preserving it from the destructive influence of alternate wet and dry, such as the ends of posts let into the ground are so much exposed to, must never be regarded as a substitute for seasoning; for though keeping out external moisture, it effectually imprisons that which is in the pores of the wood, and so hastens internal decay. While on this subject it may be as well to observe that paint, tar, and all similar waterproof coatings are only preservatives so long as the timber is already seasoned and free from moisture, as then they keep it dry; but if not, they become the most certain agents of destruction. For imperfectly seasoned timber the best preservative against the weather is a rough-sawn face, which forms a shield against both sun and rain, and at the same time offers no check to the evaporation of the moisture from the pores of the wood.—*Timber*.

**How to Skeletonize Leaves.**

First dissolve four ounces of common washing soda in a quart of boiling water, then add two ounces of slaked lime, and boil about fifteen minutes. Allow this solution to cool; afterwards pour off all the clear liquid into a clean saucepan. When the solution is at a boiling point, place the leaves carefully into the pan and boil the whole for an hour. Boiling water ought to be added occasionally, but sufficient only to replace that lost by evaporation. The epidermis and parenchyma of some leaves will more readily separate than others. A good test is to try the leaves after they have been gently boiling for about an hour, and if the cellular matter does not easily rub off between the finger and thumb beneath cold water, boil them again for a short time. When the matter is found to be sufficiently softened, rub them separately, but very gently, beneath cold water until the perfect skeleton is exposed. The skeletons are at first of a dirty white color; to make them of a pure white, and, therefore, more beautiful, all that is necessary is to bleach them in a weak solution of chloride of lime.—*Timber Trades Journal*.

CHINA offers about as attractive a field for the work of professional explorers as any other country on the globe. It has recently been ascertained that the Chinese coal-fields occupy an area of four hundred thousand square miles.