

CHICAGO AND THE WEST.

A REVIEW of the lumber traffic of the West for 1886 presents some new features of interest, and shows an average business compared with the preceding years. During the winter months a good demand for lumber gave promise of increased business, and a full stock of logs was provided, and mills in all sections, with the exception of the Saginaw Valley, were fully stocked. When the sawing season opened in April the hours of labour were generally reduced from eleven to ten per day. During 1886 fully 75 per cent of the saw mills of the West were operated eleven hours per day, and hereafter the hours will be uniform in the States of Michigan, Wisconsin and Minnesota. Few new mills were built during 1886, but those in commission have manufactured an average quantity of lumber, estimated at over 7,000,000,000 of feet. Two notable features relating to the manufacturing interest are worthy of mention. First, the large demand for standing pine timber and an advance in value of 20 per cent. in the lumber States on the lakes. The other feature was the steady and rapid growth in the amount of lumber distributed by railways from the mills direct, whereby the large expense of handling so bulky an article in the costly markets of cities is avoided. All important lumber manufacturing towns are now connected by railroads with the markets of the entire country, and Saginaw, Muskegon, Manistee, Grand Haven, Oconto, Menominee, Eau Claire, Wausaw, and Minneapolis are each to-day a better distribution point than any city to which lumber must be first shipped by lake and then pass through the expensive system of distribution which rents, towage, city taxes, insurance, and more expensive labor always involves.

During 1886 greater progress has been made in the direction of direct shipment from saw mills by rail than in any former year. This increase is largely due to the fact that trunk lines of railway have pushed their branches into the lumber-producing sections to obtain business. The St. Paul system by its connections extends throughout Wisconsin and the Chicago and Northwestern Company, together with its Omaha division, reaches every important lumber town in Wisconsin and Minnesota. Following their example, the Chicago, Burlington and Quincy, by constructing its Chicago, Burlington and Northern division and its connections, is enabled to reach all the best lumber-producing points. By these three lines of railway alone more than 15,000 miles of the best lumber-consuming territory is made directly tributary to the points of manufacture.

With all its advantages of a large local business and the immense capital employed and its unequalled facilities for a general distribution of lumber, Chicago can not long retain its present position as the best lumber market in the West in all respects. While no other city can hope to become a larger market, the combined shipments by railway from mills will materially reduce the lumber business of Chicago. Receipts of lumber in Chicago have declined 20 per cent. since 1881, and the decline in 1886 compared to 1885 is 5 per cent. and if any change occurs hereafter, it is likely to be a gradual reduction annually.

The prospect of a larger yard business for 1886 was dispelled by the general labor troubles in Chicago, which not only closed the lumber yards for eighteen days in May, but checked building operations generally. The sale and shipment of lumber has gradually increased, but the average sales of lumber for the year will show no important gain over 1885. The value of lumber has increased full 10 per cent. during twelve months past. This increase was divided between the manufacturers and yard dealers. Stocks at the mills for spring shipments are less than at the opening of navigation, and at Chicago, Memphis, and Saginaw the principal distributing points the stocks for sale are 10 per cent. less than one year ago. Eastern buyers have taken more than 6 per cent. of the lumber manufactured at the mills of Lake Superior and Lake Michigan during 1886, and will exceed that quantity in 1887. Five years ago such sales were not expected and seldom made beyond a few 3 inch deals for export.

Saginaw shows a reduced manufacture of nearly 20 per cent. compared to 1885, which accounts for the large purchases West for Buffalo and the East. Capital is ample to absorb all the desirable pine timber that is offered for sale in Michigan, Wisconsin, and Minnesota, and an increasing demand is likely to advance the price of lumber during 1887, and from present indications all engaged in conducting the lumber trade of the West may safely look forward to a satisfactory business during the coming year.

The cargo business at the exchange docks, taken as a whole, was slightly better than in 1885, in spite of the fact that the month of May was practically lost, as the labor troubles prevented manufacturers from shipping to this market. The cargo sales for the season of 1886 were 260,731,592 feet of lumber, 441,474 250 shingles, 395,527 450 lath, and 31,302 cedar posts. Compared with 1885, there was a decrease of 8,445,091 feet of lumber, 9,992,975 lath, and 20,454 cedar posts, but an increase of 117,465,750 shingles; reducing this excess of shingles to feet and the aggregate sales were 325,247,553 feet, an increase of 3,732,040 feet over 1885.

The hardwood dealers have had a good average year, and compared with the two preceding ones sales show a slight gain. The over-production the past three years has been disposed of,

and supplies throughout the country are considerably lighter. There is, however, no scarcity of any grade of stock. The furniture manufacturers have chiefly run on a cheaper grade of wood that will stain red and pass for cherry. In the last half of the year the makers of fine furniture turned their attention to oak which was also used extensively for the interior of fine residences and office buildings. The coming year promises a big "boom" in this wood, but as it is not expensive, it is not expected to have the run that cherry and walnut did. Gums met a large sale and were freely offered from the South at moderate prices. The labor troubles in the spring greatly interrupted trade during May, but well informed dealers say the time lost was a benefit to them, for they were forced to hold cherry, walnut, oak and poplar, and that has advanced 5 per cent. the past six months, from which they have reaped a practical benefit.

CANADIAN SOCIETY OF CIVIL ENGINEERS.

THE committee authorized by the Civil Engineers who met in Montreal last Autumn to prepare a constitution and rules for a Canadian Association of Civil Engineers, have completed their work and a meeting of the members was held on January 11th to adopt them. The constitution as drafted, provides that the society shall be called "The Canadian Society of Civil Engineers" and be designated by the letters "C. Soc. C. E." The objects are set forth as being to facilitate the acquirement and interchange of professional knowledge among its members, and to encourage original investigation. The term "Civil Engineer," as used in this Society shall mean all who are engaged in the designing or construction of railways, canals, harbors, light houses, bridges, roads, river improvements and other hydraulic work; sanitary, electrical, mining, mechanical or military works; navigation by water or air, or in directing the great sources of power in nature for the use and convenience of man.

The society shall consist of: honorary members, members, associate members, associates, and students. Honorary members shall not be subject to fees or dues, nor be entitled to vote. Associates and students shall possess all the rights and privileges of members or associate members, except the right to vote or hold office. Honorary members must be men who, from their position are enabled to further the objects of the society or who are eminent in the sciences connected with the profession of civil engineer, but who are not engaged in the practice of the profession in Canada. Every check is provided to prevent undesirable members being admitted. It is provided that every candidate eligible for election as member, must have been engaged in some branch of engineering for at least 10 years which period may include apprenticeship, or pupilage in a qualified engineer's office, or term of instruction in some school of engineering recognized by the Council. Two years will be allowed for any graduate who has passed with honors in his engineering course. The candidate must have had responsible charge of work as a Resident or Superintending Engineer, or a position of equivalent professional responsibility, for at least five years.

Every candidate eligible as Associate Member must have been engaged in some branch of engineering for at least five years, which period shall include apprenticeship or pupilage in a qualified engineer's office or school of engineering.

Associates must be persons not Civil Engineers by profession, but whose pursuits, scientific acquirement, or practical experience qualify them to co-operate with engineers in the advancement of professional knowledge.

It is proposed to make of the society a widely ramified institution, and a clause is inserted in the constitution providing for the establishment of local branches of not less than ten members and not less than 100 away from the headquarters of the society or any existing branch.

NEW BRUNSWICK STUMPAGE.

New York Correspondent St. Johns Globe.

The people of New Brunswick are only just now (when it has been so largely cut) beginning to discover that land covered by a growth of timber is of real value—the imposition of a decent stumpage has led them to see this matter in its true light. When \$4 per mile was the upset price charged for the cutting of timber on crown land for the period of one year, and when lumbermen are allowed to make such combinations that competition was virtually forbidden among them, and when the man that dared to bid against his neighbor was boycotted, it would be against reason that one should think that that which brought us so low a sum could possibly be worth anything. Now when he is told that he must pay \$1.25 for the right to cut from six to eight trees he looks at the matter in a different light. It has been claimed by some that this rate is too high when in reality it is lower than the stumpage on private lands. The crown land stumpage on cedar is certainly too low, only 80 cents per M feet board measure. Now a thousand feet b. m., of cedar will make eight thousand of shingles; the stumpage therefore on a thousand of shingles made out of the log will be but 10 per thousand. This rate of 80 cents per M feet b. m. on cedar cannot under the conditions of the crown land leases be raised until ten years from the date of their issuing be expired. So far from leaseholders on the Miramichi having anything to complain of, they have on

the contrary, very valuable properties since, to say nothing of spruce and pine. I know from personal experience that they have vast quantities of cedar on very many of their leases, and as there will soon be a railway bridge over the St. John, they can then run the products of their forest direct to Bangor or other shipping ports. I may mention in conclusion that Messrs. Jas. Murphy & Sons are cutting spruce boards and deals in their mill at Edmundston from logs got on the Madawaska, and shipping the same by rail to St. Stephen. I presume that so able and intelligent a firm would not do this if they were losing money by the transaction. From this one can learn what may be done by those who thoroughly understand the lumber business.

HOW TO SELECT GOOD TIMBER.

PROFESSOR HANKINS says: There are certain appearances which are characteristic of strong and durable timber, to whatever class it belongs. 1. In the same species of timber that specimen will in general be the strongest and the most durable which has grown the slowest, as shown by the narrowness of the annual rings. 2. The cellular tissue, as seen in the medullary rays (when visible), should be hard and compact. 3. The vascular or fibrous tissue should adhere firmly together and should show no woodiness at a freshly cut surface, nor should it clog the teeth of the saw with loose fibers. 4. If the wood is colored, darkness of color is in general a sign of strength and durability. 5. The freshly-cut surface of the wood should be firm and shining and should have somewhat of a translucent appearance. A dull chalky appearance is a sign of bad timber. 6. In wood of a given species the heaviest specimens are in general the stronger and the more lasting. 7. Among resinous woods, those which have least resin in their pores, and among non-resinous woods, those which have least sap or gum in them, are in general the strongest and most lasting. 8. It is stated by some authors that in fir wood that which has most sap wood, and in hard wood that which has the least, is the most durable; but the universality of this law is doubtful. Timber should be free from such blemishes as knots or cracks radiating from the center; "cup-shakes" or checks which partially separate one annual layer from another; "upsets," where the fibers have been crippled by compression; "ring-galls," or wounds in a layer of the wood which have been covered and concealed by the growth of subsequent layers over them and hollows or spongy places, in the center or elsewhere, indicating the commencement of decay.

RAT PORTAGE AND KEEWATIN CUT.

The stock of logs and lumber on hand at Rat Portage and Keewatin, Ont., on the 1st of January will amount approximately to the following:

ONTARIO LUMBER CO. (McCauley & Ryan.)	
Logs	12,000,000
Lumber	9,000,000
RAINY LAKE LUMBER CO.	
Logs	1,600,000
Lumber	7,000,000
KEEWATIN LUMBER CO.	
Logs	5,000,000
Lumber	11,000,000
MCKINNEY & CO.	
Logs	5,000,000
Lumber	8,000,000
Total	62,000,000

The sawing capacity of the mills aggregate 150,000,000 feet per season. This year one mill, belonging to the Toronto Lumber Co. (John Ross, Hamer, Ont.) was not operated.

All the stock sawed last year and what is being cut this winter is cut in Minnesota. There will probably be about 150,000,000 feet cut and run into Canada.

THEY DON'T LIKE IT.

The Grand Falls correspondent of the *Canadian Journal of Commerce*, writes as follows concerning the lumber business in Madawaska:—"The cut of lumber will be about nine or ten million in Madawaska and Victoria counties. Holmes & Hammond will have a saw shingle mill started in the spring, on the American side, to help the Vanluren mills in slaughtering our forests. No export duty is looked after in this section and it is not expected there will be before the Americans strip our lumber all off. Our mills are at a stand still. Men of capital, so far, prefer to build on the American side and slaughter the forests on the New Brunswick side to stock them; and it is hard to say how long the government are going to allow it. We cannot expect reciprocity in lumber so long as we are holding out a premium to manufacture our lumber out of the country, and allow our mills to remain idle. Mr. G. N. Hammond is driving trade. He has lately branched out in the lumbering of spruce logs which gives a market for hay, oats, beef and employment. If the law was enforced and our lumber stopped from being taken to the American side to be manufactured, he and others would soon start mills on this side of the line."