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NO. 1.

PLANING MILL PRACTICE.

WHAT do we do, or what can we do, to make all of our planed stuff of uniform thickness? Every man for himself and every mill for itself seems to be the motto and way of doing business, each having a style and thickness of its own, and each varying a little. Some have a way of making their work just a little larger, and anything that does not plane up at that goes one-eighth of an inch thinner. Another mill has a way of making its stuff a little thin, which picks up all these thin boards and everything goes into what they call a standard thickness. That is the standard for that mill. But, to be more particular, what do these individual mills do to make their own stuff of their standard, uniform thickness? Every man, when he first starts up, takes up his rule and tries one edge and then the other, to see if both sides are alike, and if one edge is a little thicker than the other, he stops, and if he is running two sides he raises or lowers the pressure bars till he gets it right, and then proceeds. But just as likely as not when he measured the first time his rule, instead of being straight across, was held at an angle of several degrees, and the board was really thinner than he thought it was, and when he comes to measure again the fault is corrected, and now he finds it wrong because he was wrong himself the first time he measured it, and the adjustment has to be all overhauled again. Finally it goes right, or, at any rate, it goes to suit him, and he goes on with his work.

Many persons carry one of these little caliper rules in their pockets, which is well enough in itself, but generally they have been carried so long that the figures are all worn out and they have to rub the bar in their hair to draw out the figures, the same as I have seen people rub the old four pences and six-pences to show the bar on them.

The way of measuring stuff to see that it is of the right thickness when we first start up is the correct way, but the way rules are often used is anything but what it ought to be, and a great many times makes the stuff anything but of a uniform thickness.

If we should take a solid gauge for thickness and slip it on to the edge of the board we should find that our rule measurements were very far from being a perfect thing.

If any person will take the pains to measure the stuff he is planing with a rule, and be as exact as he can, and then take a solid gauge made of some kind of hard wood or metal, and he will see that the ordinary measure by a rule is quite a ways from being perfect, and yet we are surprised to see that boards will show quite a difference when measured by a solid gauge, and when they are piled up the pile will stand square.

We all (or most all) of us watch the pile as it grows higher and higher, and when it goes away from the mill, and if it piles up square we "root the case" and are satisfied that the mill is running right. But, as I have said, if we take this same pile and slip a solid gauge over each edge we shall more than as likely as not find that it will show it to be quite a ways from both edges being alike.

Now, while I shall argue that all stuff, wherever planed, should be of one thickness, i. e., that $\frac{1}{2}$ inch should be just $\frac{1}{2}$ inch everywhere, and $\frac{3}{4}$ should be just that anywhere we may find it, or $1\frac{1}{2}$ should all be that, no matter who planes it or where it comes from. If we are to have 15 16 lot it all be of a uniform thickness, and not be 1-32 scant or full, as the case may be, according to the mill it may come from.

Well, how are we to get at this uniformity? We all know that under the present conditions it is next to impossible

to do it. We might as well try to bring order out of chaos as to attempt any such thing under the now existing circumstances, when everybody "paddles his own canoe."

Lumber conventions get together and talk up matters of interest in their business where dollars and cents are concerned, but I never have seen or heard of their talking up anything of this kind, notwithstanding I do think this and some other like things would be matters of interest to talk up when planing mill men have their big talks.

As an operator, I can see why it is next to impossible for every board in a lot (unless it should be a small lot) to be of the same thickness. You see, a man starts out on a lot, say 10,000 feet of boards, and he runs along till his knives get dull, and all the while his stuff is varying in thickness a little. The rule hardly shows it, but if a solid gauge is slipped over the edge it will show very plainly there is a decided change in thickness. Well, he runs till he thinks it best to sharpen his knives, and after sharpening starts up to run the rest of the lot. Perhaps he don't even try the thickness by rule, but if he did, the difference was so small he didn't think it worth noticing, and works on till the lot is finished. Now the "almost impossible" comes in in the present arrangement of the parts of the planing machine. If the operator wants to alter just a least bit, he must let his board run out and come up with the tightening nuts and turn down perhaps half a turn and then turn up again till he guesses he is about right, and starts up. Maybe he is right and maybe not. If not, he tries it again, perhaps this time guessing. We have to come down to the fact that all these little alterations are little, if any, better than guess work.

A great many planers have a gauge to set them by when we are about to make any considerable alteration, but when we come to alter just a little or, as we nearly all say, "just a hair," then a gauge does not amount to anything, and we have to guess that we have lowered or raised the head about enough. We should have to do all of this even if we had the most perfect apparatus in the world for measuring the thickness of stuff, but if we had better gauges for making these measurements and paid strict attention to their use, I think planed stuff would be much more uniform in thickness. When nothing better is to be had, if we take a good, hard piece of oak and cut into it across the grain about two inches deep, just the thickness you want the stuff, you will have something that will last a great while and be very accurate. But the hardest of oak wears away finally, and gradually the standard becomes thicker, until we have to make a new oak gauge and reduce thickness to just the point we want it.

A wooden gauge is always more or less faulty, because in damp weather it absorbs moisture to that extent that it becomes perceptibly larger. I thought one time that I would have a perfect gauge to work two sides with tongue and groove in the centre, so I took a piece of hard maple and planed to pieces $5-16$ and another $\frac{1}{2}$ inch, and cutting the $\frac{1}{2}$ inch in the centre in a way to form a tongue and groove, I glued the three parts together solid. I did have a nice one and as perfect as a wooden gauge could be, but I found by using a solid iron gauge for thickness that wet weather would make it quite a little larger. By using the two together I could, by watching out, make stuff very nearly all alike.

I have in my mind a gauge which, I think, would give good satisfaction to all parties concerned.

A bar of steel, $\frac{1}{2}$ by 1 inch and about 6 inches long, ground and polished and marked like a rule thirty seconds on one

side and tenths and twelfths on the other. On one end of this bar should be a solid flat head, having considerable surface and projecting $1\frac{1}{2}$ or 2 inches. On the bar should be a sliding head just as large as the solid one, and fastened firmly with a set screw. The movable head could be set to any point and would always be reliable in the scale on the bar was right, the thickness would be correct, and the tool could be used as long as any ordinary man would want to work in a planing mill.

If it went through the section fan several times or got into the furnaces a couple of times, where wrenches and lots of other tools frequently find a stopping place, it will become very much demoralized. If such a tool were in common use, as it ought to be, another ought to be bought for about \$1.50, which is the price such a thing ought to be made to retail for. We ought to have this for this work only, and not make it, as many other tools are made, with forty or fifty things attached to it. Say a saw set and glass cutter and can opener, a hammer and screw driver and gimlet twister and socket wrench. Tools work best that are made for and used for a special purpose and not for anything else. We think sometimes it is a gain to use a monkey wrench for a hammer, but if we do we very soon have neither wrench nor hammer to use, and have to beg, borrow, or buy both a wrench and hammer.

Now, I don't think a solid gauge to slip on to the edge of the board would cure all the ills that planing humanity is heir to or make every board from Maine to California of exactly the same thickness, yet I do think if they used to a greater extent than they are, and a certain amount of heedlessness was taken out of some of our handling and planing machines by some kind of patented process, there would be very much less grumbling among those who make the door and window frames and casings and other pieces of work where rules are brought together and show their varying thickness, and I have to be trimmed with plane and chisel in consequence. J. T. Langdon, in the *Builder and Wood-Worker*.

AN AMERICAN OPINION OF CANADA AND ITS RESOURCES.

The following is taken from the *Mississippi Valley Lumberman and Manufacturer*, and is an instance of the feeling existing across the border, regarding the agricultural timber and mineral resources of Canada.

Last week we had occasion to notice the commencement of the construction of the Winnipeg & Hudson Bay railway, and alluded to the magnificent territory which extends from the great region known as British America, stretching in a broad belt from the Atlantic to the Pacific and all north of the Northern boundary of the United States to the Arctic seas. This has been a *terra incognita* to all the world except the Hudson Bay Fur Company, who carefully concealed its wonders from the public gaze for a century. A thin border of settlements stretched themselves out the length of the St. Lawrence River, and pushed their way west along the Southern British border until they have reached the Pacific coast. This belt of, say 100 miles wide and 3,000 miles long, has been demonstrated to be not only a habitable country, but one capable of sustaining as dense a population as the same belt across Europe and Asia does now. A quarter of a century ago a large part of this belt was reported to be an arid waste, so bleak and desolate that only farred animals and Esquimaux could inhabit it. Now Manitoba, Assiniboine and Saskatchewan are conceded to be the best rivals if not superlatives to Dakota and Montana as wheat producing countries. Van

mineral deposits are being developed, and forests compared with which all the primeval timber of the United States was but a little grove, are now known to extend in an unbroken broad belt from the upper Peace and Saskatchewan country south and east across the Nelson River and Northern Lake Winnipeg country, away over the Spanish River and the vast Ottawa region, and eastward way down to the mouth of the Sauguna River and southern Labrador and the Atlantic coast. The vast and almost inexhaustible supply of timber would supply the two continents longer than the forest of Norway, Sweden and Russia have lasted Europe. These forests the races who anteceded the Romans commenced to lay down, and they are still the great source of European supply. What these great Northern woods of Europe are to that continent British America will one day be to this. What the possibilities of development in British America are cannot now be surmised, but enough is known to warrant the belief that it can feed the world. The bulk of the population of the United States inhabit the belt made by 36° on the south 48° on the north. The next 12° of latitude on our north and hundred miles longer than ours is capable of sustaining fully as great a population. Its natural location and facilities for reaching the old world markets are far better than ours and under the fostering care and aided by the enormous wealth of the mother country, its development may be far more rapid than even the marvelous progress made on our own side of the line. The sudden construction of the great trans-continental traffic line, the Canadian Pacific Railway, has in five years fully inaugurated an era of progress scarcely paralleled in the world's history. We have not the figures at hand to give the population and wealth which has seemingly sprung into existence in the Northwest Provinces, but it is amazing. The second step in the grand drama is the construction of the Hudson Bay & Winnipeg Road. These two lines with the lateral feeders which will speedily follow, are the certain means by which England intends to create a new Indian empire out of which to fill her coffers in ages to come. This great political movement on the part of our greatest rival has a significance to us beyond anything which has occurred in American history, save the Revolution and the Civil war. There is no question but that the British American Provinces can be made to produce a superabundance of almost every commodity now produced in or exported from, the double tier of Northern States. Bread stuffs, meats, wool, lumber, etc., which form the bulk of Northern States export, are already produced in them in such considerable quantities as to seriously affect our values at home and abroad. These provinces promise soon to supply the European demand and under their free trade privilege (which means maternal protection), cheap living, cheap labor system, with their more economical methods of life, can and do, produce all the staple commodities cheaper than we can, or do.

Another important factor is the great matter of transportation. With our long rail routes so crooked and circuitous that we have to go two thousand miles out of our road to reach European markets, and these routes in the hands of the most heartless and soulless corporations which ever effected a nation, who render fair competition with our northern neighbors an impossibility by their systems of extortion and robbery. These considerations render it extremely doubtful if it will be possible, at the end of another decade, for the wheat raisers and stock producers of the Northwestern States to earn a bare living. There must be a radical change or Asiatic and British American competition will destroy the great industries of Michigan, Wisconsin, Minnesota and Dakota.

RAMBLER'S NOTES.

A Visit to Some of the Lumber Firms of the Queen City and Elsewhere.

RAMBLER likes to wish all the readers of the LUMBERMAN the compliments of the season, and while doing so desires to intimate that he expects, health and weather permitting, to be present in this column once a month to tell what he has seen and heard concerning the trade and those who are engaged therein. If anyone asks you who Rambler is and where he comes from, be sure and tell him you don't know. This is by far the easiest way to tell the truth, and no one will be hurt. We have been wandering around Toronto for the past few days, and picked up quite a few notes. We have visited some of the larger firms and some of the smaller ones interested in the lumber business, and have left many others for a future occasion. When we got through with the Queen City in all probability we will turn up some place else when least expected. All that it is necessary for the members of the fraternity to do is to give us plenty of room to talk and ask questions. If they don't do this we will shake the dust from our feet and leave by the first train. There is more dry facts and lengthy figures in lumber lore than is to be found in almost anything else, but you get used to it in time and don't mind it. Why it is a common occurrence to find a lumberman with a whole year's quotations laid away in his upper storey, ready for any emergency. Ask him how the market ruled six months before, and all he has got to do is to run his fingers through his hair and he's got it.

Speaking of the individuality of lumbermen we are inclined to the belief that, as a rule, they are a liberal class of people,

and while possessing the faculty for driving a close bargain, do it in a businesslike manner and take undue advantage of no one. In making this assertion we are not doing it in the hope of securing the lumbermen's vote at the next election, but solely because we believe that our statement is correct.

But we are digressing. To digress, however, is no crime, therefore in all probability we will do it again. We were about speaking of some of the Toronto "lumber kings" and the part they take in the trade of the country. The best way to do this is to refer to each in the order of our calls, mixing up the larger and smaller concerns promiscuously. Let us commence with that well-known and ever-reliable firm of

CHRISTIE, KERR & CO.,

whose head office is situated at 9 Victoria street. The heads of this business are Mr. Alex. R. Christie and Mr. Wm. Kerr, both of whom are among the best known lumbermen of the country. They possess the widest range of practical experience, coupled with an intimate knowledge of the wants of the trade, and for the many years during which they have been engaged in this branch of trade, have achieved an enviable reputation for fair dealing and prompt and liberal dealings with customers. The firm direct the operations of their large force of men from this city, from which point also they are heavy shippers of lumber to various American ports. Their extensive mills are situated respectively at Collingwood and Severn Bridge. They also handle the product of some 10 or 12 mills besides their own assuring direct rail connections south, and by water to all points west and south. The mills of this company are large, and fitted throughout with all the latest improved machinery and appliances, while the cut averages 100,000 feet daily, and gives employment to upwards of 150 men. The firm owns several of the finest timber limits in the north which are convenient of access for bringing the logs to the mills. At the present time they have a large force of men and teams in their camps, and the output of logs this season will be unusually large. The facilities possessed by this firm for the prompt filling of all orders for home delivery, or exportation, of all descriptions of white pine, hardwood lumber, deals, laths and shingles, &c., are unsurpassed. We learn that the past season's operations have been fairly successful.

From here we step across the hall in the same building and enter the office of

WILLIAM LATCH,

wholesale dealer in hardwood and pine lumber, laths and shingles. This gentleman is one of the "old standbys" in the trade, having been actively engaged in the business for the last twenty-six years. The wholesale yards, of which Mr. Latch is the owner, are located at Carwright, Ont., where large quantities of rough and dressed lumber of every description are kept in stock. Being possessor of a considerable amount of capital this gentleman has command of a very large trade, and is prepared at all times to undertake and fill the largest contracts. As a citizen of Toronto Mr. Latch is recognized as an influential and public spirited man, and is identified with many movements calculated to promote the general welfare of the community.

Victoria Chambers, where we find ourselves at present, seems to have a peculiar fascination for lumbermen, as in addition to the two firms mentioned above, there are three others in the same building, equally worthy of mention. Of these we first visit

TENNANT & CO.

the personnel of which is Mr. J. Tennant and Messrs. Henry and Albert H. Colwell. The first two named gentlemen have been associated together in a business way for the past seven years, and are well and favorably known. Mr. Colwell, sr., has been connected with the lumber trade in Toronto for upwards of a quarter of a century, and is generally acknowledged to be an authority on all matters pertaining to this branch of trade. The firm do a wholesale trade in pine lumber, the bulk of which comes from Penetanguishene and the North Shore district. About one million feet per month is the extent of the business done. They state that the prospects for next year's trade are good, and express the opinion that a slight advance in prices will soon take place. The light stock on hand at the mills and the scarcity of cars for shipping combined, seem to effect the market towards this end.

GEORGE GALL.

Situated on the same flat as the last named firm we find the office of Mr. Geo. Gall, wholesale dealer in hardwood lumber. This gentleman has been connected with the lumber and building trades of Toronto for the past twelve years. He is a Scotchman, having left Aberdeen for Canada a score of years ago, and by strict attention to business has met with more than usual success. Mr. Gall's yard, containing on an average one million feet of lumber, is situated at the corner of Wellington and Strachan Ave. in the west end of the city. He purchases in both Canadian and American markets, and has a reputation for supplying the very best material obtainable. He reports prices firm, with a possibility of an increase.

On our way out of the building we make a call on

F. N. TENNANT,

a gentleman who has been more or less connected with the lumber business since a boy. He was a member of the late firm of J. & F. N. Tennant, who, a few years ago, handled, on an average, from 35 to 40 million feet of lumber annually. He

has since gone somewhat extensively into the real estate business, and this in connection with his wholesale business in lumber, laths and shingles, keeps him busy. Mr. Tennant's principal purchases come from Midland mills. He informed us that the building trade of Toronto for the past year eclipsed that of any previous period, and that the prospects for next year were equally encouraging.

MUSKOKA MILLS AND LUMBER CO.

Room 17, the Arcade, 24 King street west. This company was incorporated under the laws of the Province of Ontario in 1876. Its capital is \$150,000, with a reserve fund of \$100,000. The company own about 270 square miles of pine lands on the Georgian Bay, where are located extensive saw mills, which, with the vessels engaged in carrying their lumber, give constant employment to about 300 men. The facilities of this company for filling the largest orders at short notice, or undertaking the most extensive contracts, are unsurpassed. Its resources are of such a character that it is able to offer the most favorable inducements to the purchasing public, and can afford rates not easily duplicated. Mr. A. H. Campbell the head of the company, is a native of Scotland, and has been a resident of the Dominion since 1845.

JAMES CARNOCHAN,

proprietor of the Barrie Lumber Yard and Planing Mill, 61 Ontario street, and 356 to 366 Queen street east, conducts an extensive business, and is a representative man in his branch of trade. Mr. Carnochan carries a very large stock of every description of lumber, including pine, spruce and basswood boards, scantling, lath, singles, casing, mouldings, &c. In fact from this establishment the public can be supplied with every material essential to their building from cellar to attic. The premises occupied on Ontario street cover more than half an acre, while the yard on Queen street is upwards of an acre in extent. The lumber handled comes from the Muskoka, Georgian Bay and Ottawa regions. The business gives employment to about 15 men. Mr. Carnochan is a Canadian by birth, and has had an experience of fifteen years at the business.

Thinking that we had picked up enough notes in Toronto to supply sauce for LUMBERMAN readers for one month, and having espied a sign in the distance which read, "City Tonsorial Art Hall, we shied off to get a clean shave, and remove the superabundance of Toronto real estate which had very affectionately attached itself to our lower extremities. We were bound for the north, and at the mid-day Northern railway express steamed up to the Union depot we stepped on board and were soon on our way to the picturesque little town of PENETANGUISHENE.

Many a time in the past have we travelled over this route. Then we knew the location of every mile post and farm house for many miles north of Toronto; but things have changed since then, and now we find ourselves almost a stranger in the hamlets which once were, but are now prosperous villages and towns. The Northern railway has changed also. What many for years have been calling a "one-horse concern" is now being equipped equal to any railway in Canada. It has become the principal line over which to reach the great north-west of Canada, and will ere long be generally recognized as the shortest and most direct route to these far-distant provinces. But while improvements by way of equipment are observable to the most casual observer, the slow speed at which trains are run has not been improved upon. For far the management have overlooked this important matter, we might suggest that this is an age when people—if their wishes could be satisfied—would prefer to travel at the rate of a sixty-mile-an-hour wind-storm, even though there was a fair possibility of their ending their earthly career before they reached their destination. Now we believe we have said enough on this point, and if the directors of the Northern don't feel in accord with our ideas, we are satisfied in the knowledge that we have done our duty to a suffering public.

Just as we expected, we have been digressing again, and have only been brought to a sense of our duty to the lumber trade when speeding along the shimmering waters of Penetang Bay. On one side we have a glimpse of the town on a high elevation in a distance, and to the left of us a dark sail of a fishing-boat here and there, and further beyond heavily laden schooners with their cargo of lumber, saw mills, docks, and forest.

Penetang is certainly an attractive place in which to spend one's time during the summer months, but our sympathies turn to those who have anything to do with winter in this section of country. We heard enough of winters up there to make icicles sprout out of our boots, and that's all the experience we crave for.

The secret of this town's success is the extensive lumber trade which is carried on, there being about a dozen saw mills within a radius of five miles. A visit to some of these mills gave us an idea of the extensive trade being done.

"CHARLIE" MCGIBBON,

by which name the jovial and good-natured Reeve of the town is known, is among the foremost in this branch of trade. Placing ourself at his service we were shown through the mill of which he and his father are the owners. These mills have been established since about the year 1867, and from that time to the present have run continually during each season. The manufacture consists of every description of lumber, laths and shingles. The output of lumber averages from two and a half

to three million feet per annum, the bulk of which is shipped by boat to Sarnia, where the wholesale and retail yards are situated. As a rule about 20 men are employed in connection with this business, and the present season 40 men have been sent to the woods. Mr. F. McGibbon, the senior partner, is one of the oldest lumbermen at present actively engaged in the business in Canada, having already spent 32 years of his life at the work. He is a man of sterling integrity, and what he doesn't know about lumber is hardly worth finding out. By fair dealing and close attention to business he has accumulated a considerable amount of the necessary wherewith to keep him independent during his declining years. The business in Penetanguishene is under the entire control of his son, Mr. Charles McGibbon, who ranks as among the most popular men of the town in which he resides.

MR. BECK & CO.

By far the most extensive industry of the town is the "Penetanguishene Steam Saw Mill," under the proprietorship of the above well-known firm. This mill is situated close to the bay, and has been established for the past 13 years. A fire, some time ago, completely destroyed the entire works, but Phoenix like, they have sprung up larger than ever, and within the new structure is now in use some of the finest saw mill machinery manufactured in America. The output consists of lumber, laths, shingles, freight and bill stuff, the cut of lumber the past season being in the neighborhood of 7,000,000 feet. About one year ago this firm nearly doubled its capacity by buying up the large premises and machinery of the Brentwood Lumber Co. which is in close proximity to their own. In their new acquired property, they propose manufacturing bill stuff almost exclusively. The area of land utilized in connection with this business, consists of 25 acres along the water front, with three wharfs for the shipment of lumber, etc. Nearly all the lumber which goes by water finds a market at Sarnia. Large quantities are also shipped by rail to Toronto and elsewhere in Ontario. Railway ties and deals have been shipped in considerable quantities to England during the past year, and this trade is expected to increase. On enquiring the prospects for next year's cut we were informed that the company then had 150 men in the woods, and that as near as could be judged at the present time a cut of from nine to ten million feet would be made during the next season. Mr. Beck complains severely of the discriminating rates against lumber dealers in that town who are compelled to ship over the Northern railway in order to find some of the leading markets. He affirms that they are compelled to pay nearly double the rate which the railway company charge dealers in the North Shore district. Such a state of affairs as this will materially injure the lumber trade wherever such an exorbitant rate has been levied. The Northern railway evidently consider that they can act as they like in this matter, as the lumber has to be shipped, and there is no other line to carry it. Mr. Beck has been fighting this injustice for some time, but notwithstanding that he is a "solid Scotchman," his weight does not seem to have any effect. Penetanguishene owes very much of its present prosperity to the firm of which we are now writing. Mr. Beck evidently does not believe in employing assistants to look after his business, for he seems to have an eye to everything, and is hardly ever absent from his works. He is said to have accumulated a considerable fortune and is certainly entitled to his gains.

MR. D. DAVIDSON

operates a large saw mill on a peninsula across the bay, and for many years has done an extensive and prosperous business in the manufacture of the different kinds of lumber. It so happened that our visit was inopportune, as Mr. D. had left the same morning in company with a party of sports, with a Winchester on his shoulder and a rather weighty bag of cartridges at his side, for a few days hunt on the North Shore. We never had much ambition for tramping the woods after the beast of the forest and the fowl of the air, but on this occasion we were somehow drawn into the net. In company with a couple of "crack" shots, who, by the way, had intended to accompany the expedition of the morning, but had turned up too late to join the party, we set out for the neighboring woods prepared to destroy anything that happened to present itself. Time nor space will not permit of a rehearsal of our experience during that day's tramp. Suffice it to say that we had a deadly encounter with a striped rabbit and an owl. The latter we left in the tree, after sending something less than a dozen bullets after it, and bringing down a few feathers. The former we placed in our "game bag," and as the sun sank in the horizon, a homeward move was made. On reaching the town we bartered our game for three bottles of ginger ale, and if not satisfied with the day's sport were at all events quite ready to seek our virtuous couch.

THE SEASON TO CUT TIMBER.

Much has been written as to the time for cutting timber, and as authorities differ, I propose to give that time as near as possible. This is a branch of industry to which little or no attention has been given by our woodmen, who always have and are continuing to cut at any and all seasons of the year, regardless of the injury they inflict on themselves and others. I have asked the question of some who made it a business to get out timber the year round (excepting the season when they are apt to be idle and lay off, which will be the very part they should

have been the busiest,) "What is the best time to cut?" The answer invariably is, "We can sell, and the time of cutting makes no difference." This question is never asked, especially by the manufacturer or the party getting it out, and many wonder why they get so much poor or brash timber, and attribute all this to the timber itself, when in reality much of the trouble is due to the ignorance of those who cut the timber. There is a time to harvest timber (or fell the trees if nothing more) just as much as there is to harvest wheat. A farmer would never think of cutting a field of wheat when it is just headed out or in the milk, expecting that he would be remunerated for so doing, or that he was going to get a full and plump berry therefrom; and so in regard to cutting timber, we must observe the season, and when the timber is ripe, the pores or openings filled, and the tree is a solid mass, as it were; for the right season the pores or grains, as I will call them, are filled with the gum and oil that has formed after the sap has ceased flowing.

The custom has always been to cut timber in the winter time, because then the farmer, who does the most of the cutting, has the most spare time for so doing. In late seasons, when winter runs well into spring, and there has been little thawing but almost continual freezing, the damage is light, but in a reverse season cutting proves fatal.

Timber at the present day is treated somewhat different from formerly. Instead of the farmer cutting, as he formerly did, much of it is cut by parties who take it in bulk and cut at any time to suit their convenience, and as no complaint is made, it does not make any difference to them. This timber question has been much discussed at different times, and is to-day, but no one that I have seen has struck the key-note, or given definite time for cutting. Some there are doubtless who may know all about it, but I have never seen it in print, nor have I ever talked with a man who could give detailed information. Cut only when the timber is ripe. To sell it simply will do, and then you can let it lay and cut it up for what you want it for at your leisure, or in a few months. There are no exceptions to this rule, and all timber comes under it as a rule, and the time is the same for all. All must be benefitted, every person who uses timber, even to those who burn it, for fire wood cut at the right season is certainly worth fifty per cent. more than that cut out of season. Think of all those who use timber and the millions of feet that are sacrificed. England cuts her oak, her best timber, for the bark, or to save it, and at the expense of the timber, for the timber is ruined if cut when the bark peels.

I think that it is important to know the proper time to harvest timber. To individuals and to governments much has been written as to preservatives, but the best preservative is to cut in the right season. There are no doubt preservatives which can be applied for certain purposes, but they will all ways be externally and not internally. Injecting, as some have advocated and advised, is all bosh, as will be seen when thoroughly understood. The oil and gum that the timber is impregnated with is its own preservative and if cut in the right season needs no other; in fact, to impregnate with any other liquid or solution, or attempt to do so if cut in season, it will be necessary to displace the timber's gum and oil, and to do this you must destroy the timber itself in the operation of displacing. If the timber is impregnated in the same liquid, fluid or water that the displacement took place in, it will again be filled in part with its own liquids or gum. This displacement theory is all wrong, as the operation destroys the life of the timber.

Timber is never so well preserved as when done by nature and its own preservatives. I am convinced if this is observed strictly no decoction is necessary, only where an external application in some way would be beneficial. Among those that are good, are raw or hot linseed oil, crude kerosene oil, its extracts, hot or cold. Creosote, as spoken of in the *National Builder*, is no doubt one of the best of the many spoken of by that authority, but I shall say only as an external preservative, and not as an internal, as claimed. I doubt not of its great usefulness if properly applied. Many of the others spoken of by the same authority are good, no doubt. The goodness of all are as an external remedy.

The time to cut, which in my judgment is about right, is mean time, being October and November. This is the best time, no doubt. Mean time, from middle of August to first of January, and the extremes from middle of July to the first of February. You may go outside the extremes, but it is not safe. Sap commences flowing in January, it may not be much, but it is sufficient to hurt the timber; and do not commence earlier than the 15th of July. The sap has no doubt ceased flowing, but the oil and gum which the pores are filled with now have not sufficiently ripened or hardened; therefore, confine yourselves as much as possible to the mean time, October and November. This is about the time for this latitude. There is, or can be, no set time, as the seasons and locality vary. Here in central New York it varies six weeks, and all these must be taken into consideration. March, April, May and June are the out-of-season months.—*J. B. W., in Coach and Saddlery.*

The average weight of 1,000 superficial ft. of Douglas fir lumber is from 3,300 to 3,500 pounds, and it is worth from \$9 to \$25.

General News Notes.

Currier's old mill at Ottawa is being demolished.

Mr. Samuel Frazor has sold all the pine, oak and basswood on his Midland property to Chow Bros., for \$2,000.

Mr. Herbert B. Rathbun is engaged with a large crew of men in collecting logs around the shores of the Bay of Quinte.

Messrs. Hillard & Dickson, Pakenham, have sold their limit on the Clyde to Mr. W. C. Caldwell, who intends to commence lumbering on it at once.

Mr. W. H. Carpenter, of Fort William, has large gangs of men at work in the woods this winter. He expects to have a larger cut next season than usual.

The Buffalo Lumberman's Exchange which is composed of lumber dealers in Buffalo and vicinity, will hold weekly meetings throughout the winter, at the Merchants Exchange Committee rooms.

Mr. A. Hoppins, of Kingston, has purchased the stock of the Bedora mill on the K. & P. railroad. The stock is composed of 185,000 feet of hemlock, joisting and scantling, and 116,000 shingles. He has also bought 600,000 feet of lumber from the Calabogie mill, and 100,000 feet from John Schellington, of Hinchbrooke.

The lumber shipments from Montreal during the season of navigation just closed were.—To the United Kingdom, 97,804,336 feet, for 1885, 89,007,407 feet; from Montreal and Lower St. Lawrence to River Plate, 20,088,201 feet; for 1885, 31,747,142 feet. Total shipments for the season to all places, 130,602,523 feet.

A gentleman down from the lumbering regions of the Upper Ottawa reports that the number of logs made so far this season is far in advance of last year. He says this was the finest fall of log cutting he has seen for many years. Drawing has already commenced in many districts. He anticipates bright spring prospects for the trade.

Recently a man named Thomas Clark, of Bristol, engaged in one of Messrs. Guites Bros. shanties on the Temiscamingue, was killed by the falling of a limb on his head whilst engaged in chopping. His body was taken home for burial with great difficulty, first being drawn on a hand sledge a distance of 25 miles to a lake, which delayed the party a day, during which time the lake froze over and the party proceeded.

Some important changes are announced in two of the leading houses in Quebec trade. Mr. H. T. Walcot has retired from the firm of Messrs. J. Burdett & Co., of Quebec, Montreal and London; the business will be continued under the same style by the remaining partners, who have appointed Mr. H. W. Lightbourn to take charge of their London office. In addition to their Canadian business, Messrs. Burdett & Co. have arranged to sell ditch pine timber, deals, &c., for shipment from southern ports. The retiring member of this firm, Mr. Walcot, has entered into partnership with Mr. Edward Harper Wade, and will carry on business at 17, Gracechurch Street, London, under the style of Walcot & Co., and at Quebec and Montreal, under the style of Smith, Wade, & Co. From the latter firm, which has hitherto been carried on at Quebec, Mr. R. H. Smith, who was associated in partnership with Mr. E. H. Wade, has retired.

Supt. Evans, of the Deseronto shipyard, will have an exceedingly busy winter. He is making extensive preparations for the erection of the new steel steamer to which we referred last month, and which will be of large proportions. He will also build a large steam barge for the Rathbun Company. The new vessel which is intended for the Rideau trade, will be 99 feet keel, 106 ft. over all, 21 ft. beam and 6 ft. 6 inches depth of hold. He is also repairing the yacht *Norah* and will make many changes and improvements on the fleet of the Deseronto Navigation Company. Brisk times may thus be expected in the shipyard for the winter.

In conversation with a prominent lumberman on the Gatineau river and district an Ottawa *Journal* reporter learned that the winter so far has not been favorable to the lumbermen on account of the scarcity of snow. A great many teams with provisions for the shanties were stuck at points along the road. The prospects of a good cut this year are quite as favorable as last, and if a good spell of cold weather comes after Christmas the want of snow until the present time will not greatly inconvenience the lumbermen. "What firms will do most extensive work this winter?" Well, James McLaren will work his old limits as well as the Hall limit which he purchased some time ago. His operations will be considerably larger than any former year. Then Hamilton Bros. and Gilmour & Co. will, I think, do about the same as in former years. "What is the quality of timber taken out of the Gatineau regions?" "On the whole it is first-class timber both clear and large, but there is a great deal of drawing to do, which of course detracts from the value and then the length of the drive is also another drawback." "Then this is considered as a good season by the lumberman on the Gatineau?" "Well I do not say that, but there are very good prospects for a fair cut this season."

AN ENGLISH OPINION OF CANADIAN SAW-MILLS.

R. CHARLES WOOD, who was for many years manager of Mr. Chappell's saw-mill at Timico, and who until lately carried on the business of saw-miller on his own account at Camden Town, has recently returned to England from Canada and the United States, where he has been travelling for the purpose of making himself acquainted with the Canadian and American methods of running saw-mills, and to see the sights of the countries. The *Timber Trades* reports the following interview with this gentleman, which, being of interest to our readers, we reproduce:—

"I left Liverpool for Quebec on the 27th of August. The passage was very pleasant: until we neared the Straights of Belle Isle, which is the summer route to the Gulf, the winter route lying between Cape Ray and Cape North. Here owing to the unusual number of icebergs floating south, it was intensely cold. One of them had assumed the form of a cathedral, in outline not unlike Notre Dame, and, with its sparkling roofs and glittering walls, was really a splendid spectacle. An experience of icebergs, regions such as I had would enable one very easily to comprehend the wretched plight in which the inhabitants along the neighbouring coast and at the summer cod fishing grounds of Labrador were recently placed by the presence of those mountainic ice.

Well, we reached Rimouski on the following Sunday week, and Quebec at eleven o'clock next day (Monday). From Quebec I went to Toronto, and there called on Mr. Hargreaves, the well-known shipper, by whom I was very kindly received, and taken across to the Waubaushe Lumber Mills, owned by the Georgian Bay Lumber Company. These rank among the best and largest mills in Canada. They are situated at the head of the bay, in the county of Simcoe. The distance from Toronto is 112 miles.

I saw much to surprise me, the methods and appliances they employ being of the latest and most approved description. In glancing round the place, the thing that most impressed me was the important part that machinery played in every operation. The lumber is not handled by the workmen as it is in this country, being in nearly every instance manipulated by ingenious mechanical appliances. The output of the mill 150 standards per day of ten hours. The working hours are from six to six an hour between twelve and one being allowed for dinner. On Saturdays the men leave off at a quarter to six. They are paid, the mill sawyers, 12 dols. a week, and the labourers, 6 dols. a week, besides which they are supplied with three meals a day, breakfast, dinner and supper. The men live in the village of Waubaushe, for whom it has been erected by the Georgian Bay Company. It contains two churches, a library, a doctor, and a school master. (It does not possess, however, a public house or drink-shop of any kind, being under the Scott law, which prohibits the sale of intoxicants, and generally the Company seem to have given considerable attention to the spiritual, intellectual and physical needs of their employes.

The mills are at the water's edge, and the logs are drawn up out of the Bay on to the first floor of the mill by means of what the Americans call a log haul-up. This consists of a large launder, if it may be so called, hewn from the mill to the water, and supported by a shaped truss, made of two logs with a cross-piece on top. Inside the launder runs an endless chain, on the links of which spikes are fastened at the top of the launder. At the other end a man stands on a log raft, and as the logs are floated to the haul-up he guides them with an ordinary hitcher to the spiked links of the endless chain, and they are conveyed lengthways to the first floor of the mill, where all the cutting is done.

The logs are broken down with a gang, or what we should call a frame saw. First, the logs are squared with a circular saw to about 11 in., and are then cut down to inch boards. In this latter process there is great waste, each cut taking out five-sixteenths of an inch of sawdust. This is doubtless owing to the peculiar formation of the saw-tooth used in American saw-mills, and which is rendered necessary by the amazing rate of speed at which the saws are run. It is really astounding to watch the rapidity with which the log car in front of the saw is worked backwards and forwards. I saw a log 15 ft. long, 22 in. diameter, cut into twelve in. boards in a second or two under a minute. As I have already said, very little handling of the stuff takes place, and the boards fall from the saw on to endless chains running along frames, and are automatically conveyed outside the mills to the trams. They are then taken all over the yard for stacking.

The slabs taken off the round logs with the circular saw, when squaring, also fall on endless chains, which convey them to the gang slab slasher, or a series of circular saws, placed at intervals of 4 ft. apart. The chains run in guides, and are provided with spurs or spikes, which helps to hold the slabs firmly, while a lug carries them to the saws. They are then cut into 4 ft. lengths, which are sent down a shoot to another set of saws, arranged three-eighths of an inch apart, where they are sawn into laths. All laths in America are sawn; at least, I did not see a single blunder using randed laths. The slabs are also sawn into boxwood for the New York market,

and the output of this stuff alone amounts to two trucks per day.

"As you are aware, Mr. Wood," we observed, "the question is frequently asked in our 'Practical Notes' column, 'What is the best means of disposing of saw mill waste?' What is the plan adopted in the Waubaushe Mill, where, of course, there must be an enormous waste?"

"Well, the larger items of waste, such as the ends of the 4 ft. slab lengths, are burnt in the boiler fire-boxes as fuel, but the very refuse, such as saw-dust, &c., was formerly thrown into the Bay. In consequence, however, of the passing of laws prohibiting the deposit of mill refuse in rivers, the company erected a bottle-shaped iron furnace, 40 ft. in diameter. The refuse is introduced into the furnace through an opening at the shoulder, the means of conveying it there being an endless chain arrangement. Verily, endless chains are endless in America. The cost of erecting this furnace was \$25,000.

The yellow pine converted by the Georgian Bay Company is drawn from the district lying to the south of Lake Superior. Six other mills besides the Waubaushe are owned by this company, and I was told that they have sufficient timber in their limits to keep their mills going twenty years. The pine of this district is of first-class quality. Mr. Dobell, who draws some of his supplies from the same source, told me that pine is being there cut into 42 in. planks without showing a knot.

"In travelling from Toronto to Waubaushe," said Mr. Wood, "I noticed many miles of cleared woodland. A peculiar feature of it is the number of stumps which it contains. These are from three to four feet from the ground. I thought this an evidence of considerable waste in felling, and I asked Mr. Hargreaves what was the reason of it. 'The snow,' he said, 'is here about three to four feet deep in the winter, when the felling takes place. Of course it would be too expensive to remove the snow, and the trees are cut down at the surface of it.' I also noticed at Toronto that the streets are paved with cedar wood. When they want to make a new street they plough up the ground. A large scoop or shovel, drawn by a horse, comes along and takes out of this displaced earth a depth of about 12 inches. A layer of sand 4 inches deep is then laid and levelled, and, upon this foundation of sand only, blocks of round cedar, 8 inches long and cut out of the branches of the tree, are placed. Except in the better streets, the pavements are also composed of wood. Toronto seems to be a thriving city, and things are cheap, except clothing and house rent. Houses, say, which in Camden Town could be rented for £40 a year, would realise an annual rental of £100 in Toronto.

"From Toronto I proceeded to Chicago, and stopped to see the Niagara Falls en route. I have heard much talk about utilising the immense water power of these falls for driving mills, &c. but, as far as I could learn or see, nothing of any great extent has yet been done."

"What do you think of the States after Canada, Mr. Wood?" we asked.

"Well, Chicago is a very different place to Toronto and other Canadian cities. I was informed before I left Toronto that I should find the devil at Chicago; and at times, and in some places, you almost do. There seems to be little, if any, regard for the Sunday, as labour of all kinds is carried on as on ordinary days; and at the Board of Trade building, in which are located the corn, cotton, and hog rings, it is a perfect pandemonium when business is being transacted. Chicago is a magnificent city, laid out in squares, each square containing four blocks of buildings, which are among the highest and largest to be seen in any city in the world. Certainly I have never seen in any city so large a number of big buildings. Here it is not 'Great is the Diana of the Ephesians,' but 'Great is the Mammon of Chicago.' The least erected spirit that fell is the great object of worship, and everything seems sub-ordinated to it. To give you an instance—the motto of the States is, 'In God we trust; all others must pay cash.' In Canada, and in the States particularly, I noticed that children were being worked at a very tender age, and on mentioning the fact to a Chicago citizen, I received the truly American answer, 'I guess it's a free country, and people can do as they like.' This again is an outcome of their insatiable thirst after 'the almighty dollar.' A Factory Act in my opinion would be a priceless boon to the children.

"From Chicago I proceeded to Quebec, and on arriving there accompanied one of Mr. Dobell's clerks to the Montmorency Falls, which lie about seven miles below the city. The mills situated here are owned by Messrs. Hall Bros & Co., and are worked by water-power derived from the falls. The distance between the mills and the falls is about 200 yards. The latter have a width of 50 ft., and a descent of about 250 ft. A dissectible pipe composed of conical shaped joints, each joint being 4 ft. in diameter at the base and 7 in. at the apex, is placed in the water at the right bank of the stream, near the edge of the falls. The water is let in and shut off by means of a valve. The water flows into the pipe at the base or big end of the first joint. The joints are placed in this inverted order, the small in the big end, so that the water may acquire additional impetuosity. The water rushes from this

pipe into a shoot 200 ft. long and 5 ft. wide, passes into a trough or a reservoir 14 ft. square, and its course is then directed at a right angle into a launder, underneath which are six vertical cylinders conveying it to a corresponding number of turbine wheels, which constitute the motive power of the mills. Six gang saws are employed for the purpose of squaring the logs on two sides. The partially squared logs are then cut into planks and deals of various thicknesses. A series of saws subsequently cross-cut the deals into the different lengths they make. They are then conveyed into the yard by means of a shoot, at the bottom of which stands the culler, who marks the various qualities before the deals are removed for piling. When possible, the slabs I have already mentioned are cut into boards of various sizes, when, however, this cannot be accomplished, they are converted into shingles, squares for broom and mop handles, &c. Every week 12,000 logs, ranging from 12 to 16 ft. long, and 11 to 13 in. diameter, are passed through the mills, which run throughout the night as well as the day. The workmen are divided into two gangs. The first starts working on Monday at 1 a.m., and continues up to 8 o'clock, at which time the second appears on the scene. These men work up to 4 o'clock in the afternoon. The first gang then reappears and works until midnight. This process is repeated throughout the week, and it amounts to this—that the gangs work alternately one day sixteen and the next eight hours; the men are paid by the piece. Messrs. Hall Bros. & Co., in addition to utilising the water power for driving their mills, also keep going by a quantity of dynamos which supply electric light to the mills, and also to the city of Quebec. I understand that Messrs. Dobell, Beckett, & Co. have purchased the past season's output of these mills. The logs cut up consist entirely of spruce. Here, as at Waubaushe, the waste is very great, each saw, without exception, taking out three-eighths of an inch of sawdust.

SUCCESSFUL MANAGEMENT

A superintendent who has charge of a factory employing a large number of hands, writes as follows to the *American Machinist*.—Frequently of late I have been requested by a number of managers, to tell the secret of my success in shop management. It is a hard question to answer, but I will in a simple way through your paper try and explain how I manage the factory of which I am superintendent. When I first took charge I found everything out of joint, and such a thing as a system utterly unknown.

The first few days I let things go on in the old way until I became acquainted with the men and the men with me. I then set about to bring order out of chaos. My first step was to discharge every man who I found unwilling to submit to the new order of things. The first man discharged was the engineer. He had done as he pleased so long that he had an utter contempt for law and order. On finding himself locked out of the factory for disobedience he kicked the door down. A few more discharges followed, which proved sufficient to convince the men I meant business.

I then divided the factory into five departments, picking out in each the brightest fellow to act as foreman. In each department I put a responsibility upon each man, that he might feel himself of some importance. I interested myself fully in all things transpiring in each department. When I arrive in the morning I am very careful to visit each man at his post and say good morning. I ask after those absent and visit the sick. At night I place myself so all have to pass me and so good night to each.

I have at all times treated every one like a gentleman. What's the result? Every man is doing his duty. The factory is turning out more goods with fewer hands. We have a place for everything and everything in its place. The factory is clean, and I feel that I have the respect of every man about the place. I think then the secret of my success in shop management is

"Do unto others as you would have others do unto you."

WOODWORKING PATENTS.

The following list of patents relating to the wood-working interests, granted by the U.S. Patent Office, up to Nov. 25th, is specially reported by Franklin H. Hough, Solicitor of American and Foreign Patents, 925 F. Street N.W., Washington, D.C., who will furnish copies of patents for 25 cents each.

- 352,976—Planing machine.—J. P. Hoyt, Aurora, Ill.
- 353,108—Saw drive.—C. W. Wright, Democracy, Ohio.
- 352,242—Saw gang.—O. E. Williams and J. R. Browster, Windsor, Vt.
- 352,937—Saw-handle.—G. E. Siebler, Dayton, Ohio.
- 353,260—Saws. Wheel for band.—G. M. Hinkley, Milwaukee, Wis.
- 352,988—Wood-polishing machine.—A. Bridgman and J. Chilton, Umro, Wis.
- 353,302—Lathe. Turning.—S. W. Goodwin, Toledo, Ohio.
- 353,330—Saws. Guide-roll for band.—E. S. Black, Indianapolis, Ind.
- 353,385—Wood-working machine.—J. Gassey, New York, N. Y.
- 353,539—Saw-tooth. Insertible.—E. S. Snyder, Snyder's Mills, W. Va.

HISTORY OF THE SAW-MILL.

HOW surprised I was on seeing in a museum, a long time ago, such things as scissors, seal rings, necklaces, and pairs compasses, that were taken from Egyptian tombs 3,000 years old!

But, after all, men were men 3,000 years ago, and women were women. They had the wants, the needs, the vanities of men and women, and they had brains not unlike our own to supply them.

The most boastful Yankee (not that Yankees are more boastful than other people) in some of the rooms of the British Museum is obliged to confess that the ancients originated a great many good notions which we moderns have only improved upon.

For instance, there are few tools more ancient than the saw. All the ancient nations appear to have had it; certainly the Hindoos, the Egyptians, the Greeks and the Romans. The saw may have existed even before there were any men on earth.

There is a creature called the saw fly, with the saws in its tail, which actually uses for sawing the stems, leaves and fruits, wherein its eggs are to be deposited. There is also a saw-fish, the long snout of which is a saw. It is said also that the original inhabitants of the Island of Madeira found a really-made saw in the backbone of a fish.

The Greeks had a pretty story attributing the invention of the saw to the accidental finding of the jaw-bone of a snake by one Talus, who used it to cut through a small piece of wood. Being a slave, and finding that this jaw-bone eased his labor, he made a saw of iron, and thus gave mankind a new and most valuable tool.

The ancient saws differed from ours in two ways. The teeth were so arranged that the saw was made by pulling instead of pushing; and the teeth, instead of being set one to the right and one to the left alternately, were set so that ten or a dozen in succession were slanted one way, and the same number the other way.

The ancients had several varieties of the implement. The Greeks, for example, had cross-cut saws for two men, also saws for cutting marble into slabs. And they had a kind of tubular saw for hollowing out a marble bath-tub, similar in principle to the method now employed.

Among the pictures uncovered in the buried city of Herculaneum there is a representation of two genii sawing a piece of wood on a carpenter's bench very much like ours and using a saw with a wooden frame similar to those now employed. Still more strange, the frame saw tightened with a rope and stick, such as our street wood-sawyers use, was probably as familiar to the Romans as it is to us.

A saw-mill, however, by which wind, water or steam is made to do the hardest part of the work, was not known to any ancient nation.

Sawing by hand, next to digging a stiff clay soil, is about the hardest work that men ordinarily have to do. It is therefore not surprising that our ease-loving race began to experiment a good while ago with a view to applying the forces of nature to the performance of this toil.

A learned German inspector who has investigated the subject very thoroughly states that the first trace of saw-mill yet discovered is in the records of the German city of Augsburg, for the year 1337.

The reference is slight, and does not fix the fact with certainty. But there are two saw-mills near that city, which are known to have existed as far back as 1417, and they are still used.

Before that valuable invention, all boards and planks were split with wedges, and then hewn to the requisite smoothness with the axe.

The splitting of boards is still practiced in remote settlements, as I myself have seen, and it is recorded of Peter the Great, of Russia, that he had much difficulty in inducing the timber cutters of his empire to discontinue the method. At length he issued an edict forbidding the exportation of split planks. Even in Norway, covered with forests as it was, there was not one saw-mill before 1530.

Nowhere in Europe, it appears, was the introduction of the saw-mill so long resisted as in England. In 1663 a Hollander erected one near London; but it brought upon the poor man such an outcry and opposition that he was obliged to abandon it.

The sawing of timber, by hand furnished occupation, at that time, and long after, to large numbers of strong men.

In every town there was saw pits, as they were called, for the convenience of the sawyers, one of whom stood at the bottom of the pit and the other on the log.

We can easily imagine that when every beam, plank and board, thick or thin, had to be sawed by hand, the sawyers must have been a formidable body, both from their numbers and their strength.

After the failure of the Dutchman in 1663, there was no serious attempt to start another saw-mill in England for more than a hundred years.

In 1707 an English timber dealer of large capital built a saw-mill to be moved by the wind. It was thought to be a great and difficult enterprise, and it attracted much public attention. Some years before an author had explained the advantages

and economy of saw-mills; then the society of arts gave the scheme of building one their approval, and, finally, the mill was actually built by an engineer who had studied the saw-mills of Holland and Norway.

No sooner was the mill complete than the sawyers assembled in great force and tore it to pieces. The Government compensated the owner for his loss, as was just. Some of the rioters also were convicted and imprisoned.

A new mill was then built, which was allowed to work without molestation, and proved so profitable that others were soon introduced.

In no part of the world, probably, has the saw been more minutely and curiously developed than in Great Britain, where they have saws so fine as to cut diamonds, and circular saws nine feet in diameter and a quarter of an inch thick.

They have also veneer saws so accurately adjusted as to cut 18 slices of veneer from a rosewood plank an inch thick.

In London they will put a log of mahogany upon the mill and cut it into slices so thin that the sawdust weighs more than the veneer.

Yankees have beaten this performance. They take a piece of mahogany or rosewood, soften it by steam, and cut it into veneers with a knife, without making a grain of sawdust.

Daniel Webster tells us that his father had a saw-mill after his removal to New Hampshire, at the source of the Merrimac river.

Daniel, who was by no means fond of labor at any part of his life, liked nothing better in his boyhood than to attend this saw-mill, because when he had put his log in position and started the saw, he had 16 good minutes for rest or reading before the business required farther attention.—*Journal of Progress.*

CANADIAN PATENT LAWS.

Recently, at a meeting of the Inventors' Institute, held in London (Eng.), Mr. Henry E. Coombe, of St. John, New Brunswick, read a paper on "Canadian Inventions and Canadian Patent Laws." He stated that Canadian inventors were a numerous body, and their number was rapidly increasing. In the year 1885 the Canadian Patent Office issued 2,200 patents, the official fees received amounting to \$69,000. From this had to be deducted \$10,000, showing a net profit of \$59,000—certainly a pretty penny to collect from people for using their brains. In Canada the cost of a patent was about \$20 for five years, this being the Government fee. The patent could be continued for ten years longer by paying \$40. The money was payable in instalments, upon the failure of any of which the patent would lapse. The total duration of a patent was fifteen years. The agents' fees were all they could get, but the ordinary charges were \$40 to \$50 inclusive of Government fees and drawings, models being required. The business had out-grown the facilities of the department, which required reorganization. Their patent office was organized when the Canadian patents aggregated a few hundreds annually. The department was at present an appendage of the Department of Agriculture. New accommodation was required for models deposited, at present models costing scores of dollars each being stacked like lumber. A room assigned for such a purpose would be of value as part of a museum where the progress of art could be practically illustrated. Previous to the federation, each of the older provinces had its own separate patent law, but in the year 1872 a general Act was passed, and this, with the amendments of 1873-4-5 and 1883-4, made up the existing patent laws of the Dominion. He considered that the later amendments were not in the interests of inventors. Patents were issued only to inventors or their assigns. Provisional protection was secured for incomplete inventions by the issue of *caveats*. This was a secret document and was good for twelve months, conditional on no application being made for a patent for a similar invention, in which case a notice was issued to the holder of the caveat, calling upon him to perfect his invention, in three months, in order to obtain the benefit of priority. Canadian inventors complained that some parts of their patent laws were unjust to them, and they claimed the repeal of such parts on the ground that the State could not afford to deal unfairly with any of its citizens. He then quoted extracts from the Canadian Acts on the subject, in justification of this remark. He stated that, according to Canadian law, if a promissory note given for an invention did not contain on its face the intimation of that fact, the vendor of the invention was liable to a term of imprisonment not exceeding twelve months. In conclusion, he advocated the unification of the principles of the law of patents throughout the empire, so that English inventor should be able to say that his patent was his own wherever the flag flew.

NEW BRUNSWICK WOOD EXPORT.

A very considerable falling-off in exports of lumber and timber from New Brunswick appears by the comparison of shipments in this year and the like period of former years made by the St. John *Globe* of the 9th Oct. The total figures are this year 108,909,416 feet as compared with 126,497,836 feet last year. The falling off in shipping is represented by twenty-seven vessels and 21,000 tons. One of the features of the year's business is the decrease in the number of steamers coming here for deal cargoes. While twenty-three steamers of 32,451 tons cleared in 1885, only

seven of 6,864 tons have taken cargoes this year—a circumstance due, of course, to the exceedingly low rates that prevailed during the summer. By the tabular statements of the quantities sent to various ports it is seen that Liverpool, as usual, retains the first place as a market:

| PORT. | SEASON 1886. | | DEALS. Sup. feet. |
|----------------------|--------------------|---------|----------------------|
| | No. of Vessels. | Tons. | |
| Liverpool..... | 44 | 51,098 | 43,641,057 |
| London..... | 4 | 4,163 | 1,732,566 |
| Bristol Channel..... | 22 | 19,173 | 17,807,121 |
| Ballyshannon..... | | | |
| Belfast..... | 5 | 4,810 | 4,338,776 |
| Barrow..... | 2 | 1,981 | 2,130,891 |
| Cork..... | 8 | 4,576 | 4,471,189 |
| Coleraine..... | 2 | 565 | 603,713 |
| Dundalk..... | 4 | 1,965 | 1,592,753 |
| Dublin..... | 7 | 4,876 | 4,540,702 |
| Fleetwood..... | 7 | 4,740 | 3,907,580 |
| Galway..... | 3 | 1,460 | 1,439,130 |
| Glasgow..... | 2 | 1,262 | 772,318 |
| Llanellay..... | 2 | 765 | 708,208 |
| Limerick..... | 3 | 1,819 | 1,687,000 |
| Londonderry..... | 5 | 3,222 | 3,032,378 |
| Queenstown..... | 3 | 2,093 | 2,111,421 |
| Silgo..... | 3 | 996 | 1,098,212 |
| Tralee..... | 2 | 863 | 886,054 |
| Continental..... | 9 | 5,201 | 4,795,521 |
| Africa..... | 3 | 2,238 | 2,169,036 |
| Other ports..... | 14 | 6,253 | 5,511,572 |
| Total..... | 154 | 123,449 | 108,909,416 |

Fifteen other ports received one vessel each, whose aggregate tonnage was 6,253 tons and their cargoes reached 5,511,572 feet. The names of the shippers were, in order of amount, A. Gibson, R. A. & J. Stewart, W. M. Mackay, Guy, Bevan & Co., Geo. McKean, S. Schofield, Knight & Co., C. Hamilton & Co.

As to square timber, there has also been a falling off, the export of birch being less than half the quantity sent last year. The figures are as follows:

| SHIPPERS. | 1886. | | 1885. | |
|-------------------------|--------|-------|--------|-------|
| | Tons | Tons | Tons | Tons |
| | Birch. | Pine. | Birch. | Pine. |
| W. M. Mackay..... | 2,156 | 1,614 | 8,823 | 7,394 |
| S. Schofield..... | 1,265 | 202 | 3,394 | 7,394 |
| A. Gibson..... | 1,056 | 8 | 7,394 | 7,394 |
| R. A. & J. Stewart..... | 11 | 76 | 7,394 | 7,394 |
| G. McKean..... | 8 | ..... | 7,394 | 7,394 |
| Ports..... | 5,496 | 1,800 | 12,224 | 2,973 |
| Liverpool..... | 3,939 | 1,109 | 10,487 | 2,973 |
| Avonmouth..... | ..... | 76 | ..... | ..... |
| Carnarvon..... | 501 | ..... | 800 | ..... |
| Crookhaven..... | ..... | ..... | 363 | ..... |
| Dublin..... | 125 | ..... | ..... | ..... |
| Fleetwood..... | 400 | 706 | ..... | 658 |
| Glasgow..... | 512 | 9 | ..... | ..... |
| Har Island..... | ..... | ..... | 7 | ..... |
| Queenstown..... | ..... | ..... | 563 | ..... |
| Wexford..... | 8 | ..... | 4 | ..... |
| Continent..... | 11 | ..... | ..... | ..... |
| Total..... | 5,496 | 1,800 | 12,224 | 2,973 |

The *Globe* ventures the opinion that the shipment for the remainder of the year will be comparatively light, and the above proportions between the two years will probably be maintained.

In 1885, the number of vessels was 181; tonnage 144,803 tons, carrying 126,497,000 feet.

Protection Against Mill Fires.

We find, upon examination of the "record of fires in the United States," that the largest ratios of losses to premiums received are upon saw and planing mills. This at once to thoughtful minds presents the question as to how to remedy and prevent this great destruction of property. The trouble has been in most cases the great outlay of money necessary upon the part of manufacturers of lumber for an extensive fire protection plant.

A new company—the Manufacturers' Fire Equipment Co., of 155 and 157 Broadway—has been organized to fill and cover this increasing want. They agree to equip extensive manufacturing properties with all the appliances and devices known to skilled mechanics and experienced underwriters as will control any fire in its incipient stages. They rent this equipment to mill owners. They contract for insurance, also, and in most cases the rent of the equipment and the insurance combined does not cost any greater sum than is now paid by the manufacturers for insurance only.

Another feature combined with this is the careful and complete inspection at stated periods by expert inspectors, so that cleanliness, order and care of management can be guaranteed. After ten years, this equipment becomes the property of the manufacturer absolutely, and he is released from all further obligations to the Equipment Company. This seems so fair and practicable that every leading manufacturer or worker in wood should avail himself of the advantages offered.—*New York Lumber Trade Journal.*



THE CANADA LUMBERMAN

DEVOTED TO THE LUMBER AND WOOD WORKING
INTERESTS OF THE DOMINION.

PUBLISHED MONTHLY BY

A. G. MORTIMER, PETERBOROUGH, ONT.

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Advertisements intended for insertion in any particular issue should reach the office of publication at least six clear days before the day of publication, to insure insertion.

The CANADA LUMBERMAN is filed at the Office of Messrs SAMUEL DRACON & Co., 164 Leadenhall Street, London, England, who also receive advertisements and subscriptions for this paper.

Our Readers who write to Advertisers in this Journal, will oblige both the advertiser and Publisher by mentioning the "Canada Lumberman."

PETERBOROUGH, ONT., JANUARY, 1887.

LUMBERMAN congratulates Mr. Brouson, of Ottawa, on his election to the Local Legislature.

Canadian contemporary, the LUMBERMAN, has done well of green, and appears to be flourishing like the green grass under Editor Mortimer's management.—Lumberman, Buffalo.

The trade outlook in England shows no signs of improvement, the chief topics of interest being failures, both actual and prospective. This state of affairs unfortunately exists not only in London, but also in Liverpool, Glasgow and elsewhere.

We direct attention to the new advertisement of H. W. Pettie, of Brantford, Ont., which will be found on back of cover. Mr. Pettie is well known as a dealer in new and second-hand machinery, and can supply the wants of everybody from a needle to an anchor, at extremely low prices.

The motion of the publishers of the *Northwestern Lumberman*, of Chicago, for an injunction against *The Timberman*, of the same city, has been dismissed by Judge Tuley. The court wisely held that there was no ground for interference. We heartily congratulate *The Timberman*, and hope that it will enjoy a prosperous New Year.

The outlook for business among the lumberman of the Ottawa district during the present season is of a most satisfactory character, and if the fact that more lumber was sold during the past year for the United States market, than has ever been sold during the same period in the past, can be accepted as a criterion, the business done will certainly be a source of envy to other lumbering centers, whether Canadian or American.

Messrs. C. J. Wood, of H. H. Gordon & Co., and Geo. W. Hotchkies, Secretary of the Chicago Lumberman's Exchange, have recently returned home from a trip to British Columbia. It is reported in one of the coast papers that these gentlemen have arranged to purchase a large body of timber west of the Rocky Mountains, for an eastern syndicate. The statement is probably true, as the parties named do not deny it. They speak very highly of British Columbia.

It is stated that the American Exhibition, London, 1887, will open on May 2nd. A large force of men are at work, and a quantity of material is on the ground at Earl's Court. The management are assured of a larger number of desirable exhibits than they can well handle. The original scheme of the exhibition, if well carried out, will, in fact, place before the British public quite as many subjects of interests as was the case in the Indian and Colonial Exhibition, and it is to be hoped that the great American show will prove popular.

MR. DANIEL O. MAQUIN, of Montreal, one of the largest shippers in the Dominion, has assigned, and called a meeting of his creditors. The liabilities are half a million dollars. The principal creditors are, Bank of Montreal, Merchants Bank, Quebec Bank, Bank of Ontario, People's Bank, Senator Ross and Charles Simpson. The firm owns 22 vessels engaged in the lumber trade worth over a million dollars. The trouble is stated to be due to the over doing of the lumber and shipping business of the river Platte. The failure has caused great excitement in financial circles.

"A MAN out West bought a bedstead, the wood of which was so green that one warm spring day it broke out all over with little groves of waving branches. In autumn the children picked the chestnuts from the side pieces, and the next spring tapped the headboard for maple sugar." We have never had reason to doubt the veracity of editor Van Frenenburg of the *Lumber World* until now, but after reading the above item our good opinion of him has dropped below zero. How any man after writing the above can ever expect to play on the "harp of a thousand strings" is more than we can understand.

It is particularly pleasing to us to note the satisfaction expressed by the friends and patrons of this paper throughout the Dominion and our valued contemporaries both in Canada and the United States, with regard to the improvements which we have already made in the LUMBERMAN. What we have done was simply been an initial step towards still more extensive improvements. The typographical appearance of the paper is by no means equal to what we intend making it, and we hope by the next issue to present the paper in an entirely new dress of type. We have undertaken to make the LUMBERMAN a worthy representative of the great lumber industry of Canada, and by the assistance of the trade we hope to have our ambitious fully realized.

New railway projects are of almost daily occurrence in Canada at the present time. Every new point that promises business for a road if being sought out, and at the rate at which rail-laying is going on at present, it will not be long before our railway system will be as complete as a spider's web. Nothing could be more desirable for lumbermen and other tradesmen than good railway facilities. It will not only open out new and desirable sections of country, but will tend to reduce the high rates charged for transportation now existing. No matter how strong financially any company may be, when keen competition exists the tendency of rates is downward. Not only are we in need of reduced freight rates but also in passenger traffic, and it is only a matter of time before this step in advance will be made.

DOMINION Surveyor-General Deville, speaking of the result of the surveys in British Columbia, says the resources of the Province have been greatly underestimated; that the timber wealth is enormous and the extent of land adapted for agriculture greater than has been heretofore supposed. He has a high opinion of the provinces as a fruit growing centre. Of Banff, the site of the new national park, he says the scenery is unrivalled; and he thinks the Canadian Pacific railway the most stupendous monument of engineering skill which the world has yet seen. This is loud talk, but it cannot be much too loud to express the actual facts. The climate of British Columbia is greatly in its favor, and must aid in attracting capital and industry to assist in the development of its agricultural, mineral and forest resources.

A CORRESPONDENT asks the *Iron Trade Review*:—"What is the correct spelling of that indispensable little tool, called the monkey wrench? What had the monkey to do with it anyhow?" And in reply the editor of that journal says: "Capital M-o-n-k-e-y, so named from the inventor, Charles Monckey, and not from our Darwinian ancestor. We hope the statement in the papers is not true, by the way; that Charles Monckey is living in poverty, in Brooklyn, N. Y., while parties who bought his patent for \$2,000, are making millions of dollars every year. At any rate, he ought not to have the additional indignity of a misspelling of his invention cast upon him, as was recently done by a well-known machinery paper that ought to know better. Even Webster's Unabridged does not appear to know the derivation of the word."

TO EVERY one sending us \$1.25 we will mail to their address THE CANADA LUMBERMAN for one year, and a copy of "Scribner's Lumber and Log Book," which is a work every lumberman and wood-worker should have. It gives tables for finding the correct measurement of scantlings, boards, planks, cubical contents of square and round timber, saw-logs by Doyle's rule, stave and heading bolt tables, cord wood, prices of lumber per foot, speed of circular saws, weights of wood, strength of rope, felling of trees, growth of trees, tables of wages by the month, price of standard logs, interest tables, etc., etc., to which is added 60 pages of new tables, making 160 pages in all. It is the most complete book of the kind ever published. It is worth many times the price of the subscrip-

tion, and no lumberman or wood-worker can afford to be without it. This offer is good for a limited time only, and should be taken at once.

THE American consul at Ottawa, Ont., furnishes the following summary of the values of the various products of the forest exported to the United States from the Ottawa consular district for the fiscal year ending June 30, 1886: Sawed pine lumber, \$2,045,809; box shooks, \$46,423; latb, \$26,456; railroad ties, \$11,604; pickets, etc., \$23,761; match blocks, \$8,450; telegraph poles, \$2,033; hemlock bark, etc., \$4,500. Total export, \$2,225,000. In addition to this, 35 per cent was used for home consumption. The total amount of lumber manufactured by the Ottawa mills for the year is placed at 288,000,000 feet. The principal destinations of the consignments sent from Ottawa to the United States were Burlington, Albany, New York and Boston. A large proportion, however, of the lumber sent to the United States has been exported from thence to South America, the West Indies and Africa. The square timber trade, which at one time was so largely carried on along the tributaries of the Ottawa river, has been almost entirely abandoned, nothing having been done in that way during the past year.

THIS re-sawing business is getting to be a great thing. A New York correspondent of a prominent lumber journal writes: Machinery men who are constantly devising labor-saving and product-increasing machines will soon have to stand a heap of cussing from the lumber dealers who have heretofore sold box makers one and one-fourth inch stuff. The box manufacturers have all along bought one and one-fourth inch pine to re-saw into one-half-inch, and as experiments with re-sawing machines using thin saws have proved entirely successful, it has been found that Canada pine boards sawed plumb inch, as is the custom, can be re-sawed and produce lumber fully as thick as formerly obtained from one and one-fourth inch stock re-sawed on an old style machine. It is also claimed that Michigan pine boards can be re-sawed and produce stock 1-16 inches in thickness, which for many purposes is thick enough. An investment of say \$1,000 in a thin re-sawing machine will more than save its cost in a year in any ordinary box factory.

We have pleasure this month in drawing attention to the new advertisement of The Polson Iron Works Co., of Toronto, (Limited), which appears on third page of cover. This company is a consolidation of the well-known firms of Wm. Polson & Co., Toronto, and Thos. Worswick & Co., Guelph. They have recently opened up in their new and extensive premises on the Esplanade, foot of Sherbourne street, in which they have located some of the finest iron and wood-working machinery to be found in the Dominion. The main building, which is constructed of corrugated iron throughout, is 240x50 feet in size, and contains two stories. This building is divided into six departments: machine shop, blacksmith, boiler, boat-building, pattern and pipe shops. In addition to this there is a large ware room, two stories, 70x25 feet. The manufacture consists of the "Brown" and "Allan" automatic engines, steam yachts and launches, vertical, hoisting and marine engines, a large variety of slide valve engines, particularly constructed for saw-mills; iron tools and boilers of all descriptions; etc. The company claim that their "Brown" automatic engine, for economy of fuel, durability, regularity of speed, and other features, surpasses that of any other. While visiting these works we were shown a number of elegant yachts which this firm have been building, which clearly indicate that the company are experts in this important branch of their business. In addition to the manufacture of the class of machinery above referred to the company buy and sell all classes of second-hand machinery. Saw and planing mill owners in particular, requiring anything in this line, will be amply repaid by visiting these works.

A FEW years ago trade publications in the Dominion were comparatively scarce, but with the wonderful strides made in all classes of manufacture, trade journalism has become almost an indispensable accessory to each and all of the leading branches of industry. One by one journals of this nature have been established, and although in the past it has been uphill work for the publishers to impress upon the minds of manufacturers and others their duty towards publications devoted to their respective branches of trade, and the profits which would naturally accrue, by extending to such a liberal patronage, still this difficulty, to a certain extent at least, has been obviated, and the manufacturer and dealer in Canada, as in the United States, now realize its importance. In the matter of advertising, manufacturers in the past have depended almost entirely on the daily press as mediums through which to introduce their wares, but while this, to a limited extent, has proved beneficial, they have paid extravagant rates for a large circulation, of which seven-eighths, possibly, would pass into the hands of persons in no way interested in the class of goods they are offering for sale. But this is by no means the case when class journals are patronized. Each paper has a separate and exclusive field to cover; every man who receives such is directly or indirectly interested in everything its pages contain,

both reading matter and advertisements. Should they be in need of new machinery, or new appliances, they will naturally turn to the journal specially devoted to their interests, and the man or firm who manufacturers such—and have business enterprise enough to make the fact known—is the one who is best fitted thereby. As an instance of the success which has already been achieved by technical journals we have pleasure in mentioning that handsome monthly, the *Dominion Mechanical and Milling News*, of Toronto, the only objection to which is its unpardonable long name, our italic letter being the sufferer in this case. Mr. C. H. Mortimer, the publisher has, since assuming control of this paper, materially improved it in many respects. Millers and manufacturers have reason to be proud of their organ, and at the extremely low price of one dollar per year none should be without it. Other similar journals in Canada are also entitled to a large measure of credit, and we trust that as time rolls on, the trade press of Canada will be generally recognized in every calling, as it has been for years in our sister country across the border.

CONCURRENTLY with the advent of the New Year, the first issue of the seventh volume of the CANADA LUMBERMAN is placed in the hands of its constituency of readers. For the first time since assuming the editorial management of this journal it is our privilege and pleasure to extend a hearty, friendly New Year's greeting to each and all of our readers and friends, sending our best wishes for their continued happiness and prosperity. Since the commencement of 1886 our readers has more than doubled, and the many tokens of confidence and appreciation we are receiving from one end of the Dominion to the other, stimulate us in our work, the duties of which we hope to perform for many years to come. By degrees we are becoming familiar with the requirements of the trade, and any deficiency of the past, we hope to make up for in the future. To successfully conduct a paper as the LUMBERMAN should be conducted, every one who desires to see the great timber interests of Canada prosper, should do his share towards furnishing information to the editor for publication. We are pleased to note the remarks of a correspondent which appear in another column, about this matter, and also to perceive that others have also supplied valuable matter for the current issue. No one need hold off for fear of encroaching on our space. We want everybody's opinion, and will see that due prominence is given to all matters which have a bearing on the trade. The CANADA LUMBERMAN is the organ of no individual man, clique of men, or company, and is therefore prepared to discuss all questions independently and fearlessly, with regard only to the well being of the great industry, the cause of which it aspires to espouse. The year just closed has, on a whole, been a fairly prosperous one for Canadian lumbermen. There certainly have been times during this period when our lumbermen have realized a stagnation of trade, but everything considered the season's operations has been pretty generally encouraging. The unsatisfactory condition of the timber market in Europe for some time past has materially lessened the shipments which would have been made from Canadian ports had a more active demand existed. What the outcome of the depression in Europe will be is hard to determine, but from our English exchanges it would appear that with the opening of spring a new impetus will be given trade, and business generally will gradually pass from under the cloud which now hangs so threateningly over the whole country. Such a change would be hailed with delight by Canadian lumbermen, and it is to be hoped that conjecture may ere long change into reality, and that the year 1887 may be remembered in the future as one of the most prosperous in the history of the trade.

EXCHANGE ECHOES.

Contemporary Opinion on the Various Matters of Interest to the Trade.

The Wood Worker.

It is painful to the lover of nicely manufactured lumber, to visit some, a great many in fact, of the country hardwood saw mills, and witness the manner in which good logs are butchered. The holders evidently hold the mistaken opinion that no brains are needed in this business.

The Chicago Timberman.

There is considerable complaint in northern Maine of the operations of Canadian lumbermen in Aroostook county, that state. They cut lumber on the St. John waters, float it down to New Brunswick mills, where it is manufactured, and thence shipped back to this country free of duty. The forests of Aroostook are thinned out, while foreigners reap the profits.

Lumber World, Buffalo, N.Y.

Market reports and trade advices combine to show a general tendency to advance prices, and the latter show that the tendency is based solidly on a large business. Supplies are not excessive and demand is large. Prices remain firm and inquiries are sufficiently numerous to give hope for a good business far into the winter. There is not what might be called a "boom," nor is a boom desirable. Steady growth is far preferable, and that is now the condition of the lumber trade.

The Wood-Worker.

A lumber journal calls attention to the danger which is supposed to lurk about the band saw mill in the shape of very fine

dust which is produced by that machine. Attention is called to the fact that fine flour dust, and many other substances when reduced to this state, are highly inflammable and explosive in character, hence, why not wood dust? It is said that two or three late saw mill fires were caused by these very fine particles of wood, set on fire by a heated journal. Whether these claims have been proven or not it will be wise for owners of band mills to see that the mills are kept clean as possible, and the dust all brushed off before leaving them at night. Wetting them down before leaving might be a good idea.

Northwestern Lumberman.

Nearly all the news from the woods is to the effect that the logging season set in a month earlier than last year, and it is generally stated that so far the conditions for cutting and skidding have been excellent. It is hardly necessary to say that these conditions have been fully utilized. No matter how good the market may be next season, there will be plenty of lumber, and probably a surplus. Should the demand from any cause be light, there will be an overstock. So long as the manufacturers are asserting that at the present prices of lumber and stumpage there is little or no profit in manufacturing in many cases, and as the tendency of stumpage is upward, all this disposition to rush logs in is a hard conundrum to solve. If lower prices for lumber rule next year, the manufacturers should not complain. No man should grumble if obliged to lie in a bed that he makes with his eyes wide open.

Northwestern Lumberman

If the fine dust that collects in a band mill is occasionally the cause of a fire why may not some of the mysterious fires in other saw mills be attributed to the same cause? No matter what kind of a saw is used there is a collection of fine dust in out of the way places, and in a circular or gang mill there is no good reason why this dust, under certain conditions, should not be subject to spontaneous combustion the same as though it were in the band mill. Many a mill has gone up in smoke when it was absolutely known that the fire started in the main body of the mill, where no heat or lamp was used or required. One of the conditions which would render dry sawdust liable to ignite spontaneously would be the mixing of oil with it, and this might be readily brought about by the oil being scattered by the force of the machinery. There are men who know how to oil machinery and others who do not. With the former enough is plenty, while the latter are everlastingly dropping the oil boxes. When oil is applied too plentifully it drips or is thrown off by the machinery, and why should it not come in contact with the fine dry sawdust when such sawdust is in the way? The theory that the destruction of mills, oftener than is supposed, is due to spontaneous combustion is certainly a tenable one.

COLONIAL WOODS.

(From Messrs. Duncan, Ewing & Co's. Wood Circular, Liverpool, 4th December, 1886.)

YELLOW PINE LUMBER—The import from Quebec during November has been exceedingly small, comprising only 5,000 feet of Square and 54,000 feet of Waney Board Wood. This has enabled merchants to deal more with their yarded stocks, and the deliveries of both descriptions during the month amounted to 106,000 feet, as against 151,000 during the same period last year. Stocks are very moderate. Three vessels from Quebec have arrived here since the 30th ultimo, and practically the import season may now be considered over. The wholesale transactions during the month comprise a parcel of 1st quality Waney Pine, 17 inches average, at about 23½d per foot ex quay, and 2nd quality 19 in. average, at 18d per foot ex quay. A parcel of G F A Square Pine, 60 feet average, has been sold at 20d, and a parcel of Miramichi Pine at 13d per foot ex quay. **Red Pine Timber**—No arrivals and no sales to report. **Oak Logs**—The export for the month has been only 4,000 feet and the consumption 26,000 feet, as against 45,000 and 73,000 feet respectively during the same period last year. The stock on hand is only about half of that of last year. There is a fair demand for prime wood and prices are well maintained. **Ash**—The import has been light (2,000 feet), whilst the consumption amounts to 5,000 feet. No wholesale transactions to report. **Birch**—The import has been moderate and the demand good. Sales comprise a parcel of Quebec, 18 inches average, at 19½d. **Elm**—A parcel of Quebec has been sold at 22½d per foot, ex quay. **Quebec Pine Deals**—The import though light has been quite sufficient for the demand. No wholesale transactions to report. **Quebec Staves**—No arrivals. **Cull Pine** have been sold at £15 and Cull Puncture at £12 10s per mille.

BARK Vancouver, loaded with spruce deals by Messrs. King Bros. for Londonderry and wrecked at Manicougan, is breaking up, her cargo floating about in all directions.

MR. GARRAT, proprietor of a mill at Ifracombe, ran against the lever in his mill and was thrown on the large circular which severed his left arm completely off near the shoulder. His body was also gashed in several places.

THE Charlemagne Lumber Company at its annual meeting in Montreal elected the following directors:—Messrs. Robert Reford, D. W. Ross, A. McLaren and J. Dillon. At a meeting of directors afterwards Mr. Reford was chosen president and Mr. Dillon secretary and treasurer.

PERSONAL.

(Contributions from or concerning our friends and patrons are freely welcome to this column. The name of the sender must always accompany such notices.)

A prosperous new year to one and all of LUMBERMAN readers.

Mr. J. T. Lambert, lumberman, of Ottawa, is likely to be elected alderman for one of the wards of that city.

Mr. W. H. Rowley, local manager of the Merchants' Bank, has accepted the position of manager of the establishment of Mr. E. B. Eddy, at Hull.

Henry Fox, proprietor of the large planing mills on King street, west Toronto, was found dead in his arm chair on Christmas morning, where he had been left sitting when the family retired the previous night. His death is attributed to a stroke of paralysis. He had been in excellent health. He was 61 years of age.

MR. JOHN BOLTON, formerly of Ottawa, who has been contracting in the lumbering business and railroading at the Pacific Coast for years, returned to the Capital during the past month. Mr. Bolton was in the employ of Mr. J. R. Booth, some six years ago, after which he left for the Pacific Coast, and has been fortunate enough to build up a successful business.

Hon. J. G. Thorpe, of Eau Claire, Wis., president of the Eau Claire Lumber Company, was at Winnipeg, Manitoba, last week, with some other Chippewa capitalists. Mr. Thorpe is interested in a large lumbering operation on Bow river, in the province of Alberta, where he has been looking over the improvements made, and figuring on the business to be done next year.

OBITUARY.

The many friends of **Mr. David Moore**, the well known lumberman, will grieve to learn of his death, which occurred at his residence, River View, on the Aylmer Road on Thursday Dec. 7th. On the Friday previous he was afflicted with a paralytic stroke, the fourth of the kind which he had experienced. For six days he lingered on, in a semi-unconscious state, attended by Dr. Henderson and surrounded by the members of his family, who watched day and night at his bedside to the last. Mr. Moore was born in Hull 62 years ago, and his interests have ever since been centered in that locality. He leaves a large fortune, acquired by dint of perseverance and business ability. From his earliest years he had been identified with the lumber business, and at the time of his death was one of the oldest, if not the oldest lumberman in the country. At an early age he succeeded his father, David Moore, sen., in the lumber business established by him, and developed its restricted operations to an enormous extent. One rule of his business career, and one to which he attached great importance, was to deal entirely on a cash basis, and he was wont to pride himself upon the fact and point to it as one of the secrets of his success. He owned and operated extensive limits upon the Ottawa, Petowawa, Desnoines, Mattawa and Deep Rivers, and dealt exclusively in logs and square timber. In his transactions with his fellow merchants he gained their universal respect and admiration. Some twenty years ago he built River View, his handsome residence on the Aylmer Road, about three miles from the city, and there, surrounded by every means of comfort, he dispensed hospitality with a generous hand. In 1854 he married Miss Catherine Cutler, by whom he had six sons and one daughter, all of whom survive their parents, Mrs. Moore having died about four years ago.

Deceased's funeral obsequies took place on the Sunday following his death, and the remains consigned to their last resting place in the Hull Cemetery. From about two o'clock till the conclusion of the ceremonies, the Aylmer Road was crowded with people. At the deceased gentleman's residence at Riverside, all the space about the house was occupied by carriages. The house, which was thrown open, was filled with friends and acquaintances, anxious to get a last look at the face of their deceased friend. The room in which the casket lay was beautifully ornamented with flowers, and the handsome coffin was buried beneath wreaths of beautiful flowers presented as tributes to the memory of the deceased. Conspicuous among the floral offerings was a large and magnificent pillow of flowers from the sons of the deceased, upon which was worked in words "Our Father." Among those who attended the last rites were noticed nearly all the lumbermen in the Ottawa district, besides representative men from the cities of Hull and Ottawa, and from the County of Ottawa. About 2:30 o'clock the service at the house was conducted by the Rev. Frank Smith, pastor of St. James Church, Hull, at the conclusion of which the remains were borne to the hearse by the pall bearers, Messrs. Hiram Robinson, E. B. Eddy, G. B. Pattee, J. R. Booth, C. Smith, R. McConnell; W. H. Thistle and F. H. Kirby. The cortege then moved to Hull, the first four carriages were occupied by the pall bearers and immediately following the hearse came the carriages occupied by the sons and near relations of the deceased. The funeral procession was over a mile and a half in length.

General News Notes.

There are 1200 men engaged in the Gilmour shanties.

The product of the Minneapolis saw-mills for 1886 was 282,636,091 feet.

Messrs. Butchart, Bros. & Co., lumber dealers of Rimouski, have assigned.

About 300 miles of a Kippawa timber limit was sold recently at \$1,000 a mile.

J. Millon Williams, a pioneer miller and lumberman, of Arden, Ont., is dead.

By an explosion of dust in a planing mill in Cambridgeport, Mass., six men were fatally burned.

A quantity of logs were caught by the cold weather, in the St. John river, N. B., and frozen in.

There are about 150 planing mills and other shops making wood finishing materials in Chicago.

A St. John's, N. B., paper informs us that the big raft at Joggins is now conceded to be a failure.

The total cut of logs in the Duluth, Minn., district for the present winter is estimated at 140,000,000 feet.

L. P. Morin's sash and door factory at St. Hyacinthe, Que., was burned Dec. 2. Loss \$18,000; insurance \$3,500.

It is estimated that nearly 10,000,000 feet of lumber will be required at Duluth for elevator building before next fall.

F. Curran, Quebec, left a lumber camp in Auckland township, cut a hole in the ice with his axe, and deliberately plunged in.

Operations in Messrs. Bronson & Weston's shanties are now in full blast, and they report that this is a most favorable fall for log making.

A woman works in a Kalamazoo (Mich.) cooper shop who can make as many barrels in a day as any of the men who work with her.

The Wm. Cane & Sons Mfg. Co., of Newmarket, Ont., recently offered Mr. John A. Sharp, of King township, \$1,000 for fifty-eight pine trees.

The first saw-mill built upon Puget Sound was erected in 1851. It was a small water power mill, with a daily capacity of from 8,000 to 10,000 feet.

A plank twenty feet long and nine feet wide, without knot or blemish of any kind, is one of the contributions of British Columbia to the Liverpool exhibition.

Messrs. Hurdman & Co., Ottawa, have made preparations for a much larger cut of logs this season than hitherto, and have already sent 790 men to the woods.

The Parry Sound Lumber Co's steam barge *Lothair* and barge *Corsica* have been frozen in at Port Colborne, where they were run for shelter during a gale.

It is said that Chinamen smuggle opium from British Columbia into Puget Sound towns by concealing it in sticks of timber, which they tow across the line.

The Thayer Lumber Company, of Muskegon, Mich., will put in 10,000,000 feet of lumber in the vicinity of Herson, Mich., according to local newspaper reports.

W. H. Fraser, late of the firm of Gatliff & Fraser, lumber dealers, Emerson, Minn., has gone to Edmonton, where he will go into business with his brother in the saw-mill.

The Conger Lumber Company, of Perry Sound, Ont., recently sent its foreman, Mr. William Boaty, to Alpena, Mich., to study American methods of lumber making.

It is reported that Messrs. Parley & Pattie, of Ottawa, have sold their cut of pine deals and siding for next year to Mr. Cox, of Liverpool. No terms or prices have transpired.

Broad & Sons, of St. Stephen, N. B., has lately received a large amount of new and costly machinery, making their establishment second to none of its kind in the Dominion.

Sales of timber, says a Quebec exchange, are taking place every day, and manufacturers are getting rid of a good deal of stuff. Prices are suffering, more especially in hardwood, elm, ash, etc.

The feeling has become almost general among the largest lumbermen that it is more profitable to cut logs than to purchase them on contract. This means that the contractor's occupation has almost gone.

It is stated that the new watch factory at Canton, Ohio, will have one and three-quarters miles of shafting, about 8,000 pulleys, and at least fifteen miles of belting. There will be a handsome order for one or more houses.

The schooner *Clara E. Simpson*, from Windsor, N. S., for Baltimore, Put into Portsmouth, N. H., November 19, with loss of her foretopmast and jib boom. She sprung a leak in a gale and threw overboard her deck load of 250,000 lath.

John McRae, of Glencoe, Canada, has purchased a tract of pine in the vicinity of Keyes Lake, near Florence, Wis., of Brooks & Pumpelly. He will get out square timber for the foreign market. The timber will be hauled to Florence, shipped by rail to Escanaba, and thence by water to its destination.

A great revival is sweeping over northern New Brunswick. It is said to be unequalled in the history of the province.

Advices from New Zealand state that a company has been organized to construct a cable from New South Wales to British Columbia at a cost of \$10,000,000. An annual subsidy of \$500,000 is expected to be obtained from the colonial and imperial governments jointly.

The Canadian lumbermen cut the cream of their logs into deals for the English market. Deals are three inches thick, ten feet and upward long, and nine inches and upward wide. They are assorted into firsts, seconds, thirds and fourths, and these grades only are exported.

Owing to the fine weather, says an Ottawa despatch, the Montmorency and Chaudiere saw mills are enabled to go on sawing at the rate of about 4,000 logs during the twenty-four hours, the result of which will be that but comparatively few logs will remain over the winter unsawn.

The Parry Sound Lumber Company's schooner, "Jane C. Woodcruif," the wreck of which was mentioned in our last issue, has been abandoned, having been found to be so badly damaged as to be not worth the expense of taking her off the shoal and repairing her. The cargo may yet be saved.

During the past season Ottawa lumbermen have been experiencing great difficulty in obtaining lumber cars and barges for the shipment of their lumber. Large quantities of lumber still remain, and now that shipment by boat has ceased, large shipments are expected during the winter by rail.

Shipments of lumber from the port of Dalhousie, N. B., during the past season, were 18,315,329 s. f. deals, scantling and boards, 551 tons birch timber, with ash, maple, staves and laths. These were shipped in forty-two vessels whose tonnage was 21,947 tons.

Says a Minneapolis, Minn., journal: Oshkosh sawed 50,000,000 feet of lumber this year against 80,000,000 last year. Where is the man that said the Green Bay district was denuded of its pine years ago? Oshkosh will continue to keep the sash and door trade of St. Paul and Minneapolis demoralized (by railroads,) for the next fifty years.

The lumber shipments from the port of Dalhousie, N. B., during the past season, comprised 18,615,329 superficial feet of deals, scantling and boards, 551 tons birch timber, 83 tons pine timber, 550 tons spruce timber, with ash, maple, staves and laths. The shipments show some increase over those of last year, and not very much difference from those of 1884.

Germany has 34,000,000 acres of forests whose estimated value is \$2,500,000,000, and whose annual revenue is \$50,000,000. Great care is taken of the state forests. In Russia re-planting is systematically carried on at an expense of \$500,000 a year. The imports exceed the exports by 2,000,000 tons. Every possible precaution is taken to prevent the wastage by forest fires, so common and so enormous in the United States.

Lumber for sounding boards of instruments is very carefully selected, and air-seasoned for about a year, with six weeks of subsequent kiln-drying in a dry-house at a temperature of not over 120 F. This slow process of drying is necessary for all sounding lumber. After the lumber is planed and edged it is carefully assorted, matched and glued into boards of an average size of four by five feet. The entire board is generally planed three-eighths thick.

On Thursday afternoon, November 25, the schooner "P. E. Young," of Toronto, arrived at Niagara loaded with lumber. Taking advantage of a fair wind she sailed for Queenstown on Friday without reporting to the Customs, and returning on Monday was seized by officers and held subject to the decision of the Customs Department at Ottawa. On Monday evening the captain was told by the collector that he could leave by depositing \$100 subject to further decision.

The Canadian Pacific Railway always with the comforts of the travelling public at heart, offer the following very liberal arrangement for Christmas and New Year's holiday travel:—Return tickets at single fare between all stations on its line, Dec. 25th noon to return till Dec. 27th, 1886; and on Jan. 1st, 1887, good to return till Jan. 3rd, 1887; and at fare and one third, Dec. 23rd, 24th and 25th and Dec. 30th and 31st and Jan. 1st, 1887, good to return till Jan. 4th, 1887.

During the month of November there were recorded seventeen fires in the United States, each with a loss of \$10,000 or over lumber manufacturing mills or factories employed in using lumber largely. Forest fires aggregated a loss of \$85,000; chair and furniture factories \$105,000; lumber mills \$140,000; carpenter shops, sash and door factories \$20,000 wagon factories, \$25,000; piano factories, \$25,000 and planing mills \$70,000. These items alone represent a loss of \$560,000 for the month, a severe tax on these great industries.

A prominent Saginaw lumberman, a manufacturer for fifty years, than whom there are none more competent to judge, pronounces the big mill at Duncan, Mich., the finest mill he ever saw, and he has seen nearly all he gilt edged mills in the country. The late Thompson Smith, besides being a master financier, was also a man of great mechanical genius, and in building the big mill much labor-saving machinery was used of his own design, which is used only by this mill. The Duncan City plant is one of the most valuable in the state.

The Manitoba and Ontario Lumbering Company intend going into lumbering on a very large scale this winter, says a Winnipeg exchange. Their limits are all on the Minnesota side of the boundary, but their mills are situated at Keewatin, whither logs are brought by Rainy River and Lake of the Woods. They will this winter cut probably 15,000,000 feet. Last year it was only 6,000,000, and they have at their mills at Keewatin some 8,000,000 feet of logs.

The past season has been a good letter period for the lumber industry, and the outlook for the coming year is regarded as exceedingly bright. The following is a carefully prepared but unofficial estimate of the cut of the leading Chaudiere lumber men during the past summer: Mr. J. R. Booth, 60,000,000 feet; Messrs. Bronson & Weston, 60,000,000 feet; Messrs. Parley & Pattie, 50,000,000 feet; Messrs. Hurdman Bros., 25,000,000 feet; Messrs. Grier & Co., 15,000,000 feet. It is reported in lumber circles that Mr. Stewart has purchased the controlling interest in the firm of Messrs. Grier & Co.

The C. P. R. mill, about two miles west of Sudbury, will be kept running all winter. The Company have several parties cutting logs on their limits in the township of McKim. There are two firms lumbering on the Wauvital River 12 miles west of here. The Emery Lumber Co. have three camps in operation on this stream cutting logs. Their operations will be less than last winter. Timmins Gorman are also operating one camp on this river, cutting logs and timber. On the French River and tributaries there are several new firms, and the business done this season will be much larger than the last season.

No further attempt is to be made to entice the big Nova Scotia lumber raft further into the water. It is being rebuilt. A steam derrick has been erected, and the timber is to be drawn up the shore. The timbers for the ways are to be five feet longer than in the present raft, and the angle of slope for the ways will be increased. The new raft is to be 600 feet long, an increase of 200 feet on the present one, and will be completed in May next. The expense since breaking down has been \$4,200 and rebuilding will involve a further outlay of \$2,000. Still, it is said, the owners will be able to avoid loss if this new attempt succeeds.

The improved French method of preserving wood by the application of lime is found to work well. The plan is to pile the planks in a tank, and to put over all a layer of quicklime, which is gradually slaked with water. Timber for mines requires about a week to be thoroughly impregnated, and other wood more or less time according to thickness. The material acquires remarkable consistence and hardness, it is stated, on being subjected to this simple process, and the assertion is made that it will never rot. Beechwood prepared in this way for hammers and other tools for iron work is found to acquire the hardness of oak, without parting with any of its well-known elasticity and toughness, and it also lasts longer.

A case which involves some very interesting points promises to come before the Ottawa courts shortly in connection with the sawdust nuisance in the Ottawa river. The complainant, Antoine Ratto, is a well-known boatman, who purchased property on the Ottawa 22 years ago with the view to make a profitable living out of the renting of boats, &c. Had the river remained in the same condition he claims that he could have more than doubled the value of his property and capital. The saw-mill industry, however, has killed off boating, polluted the water and turned the beautiful stream into a stretch of sawdust, slabs, lath, &c. Ratto says his business has been ruined thereby, and claims \$74,300 as compensation. He threatens that unless this sum is paid he will enter a suit for damages against the mill owners.

The shipments of lumber which take place yearly from Ottawa value far up into the millions. The outlook for the coming season is most flattering. All the lumbermen are unanimous in stating that the cut this season will not be below the average, while two expect to double their cut. The amount of lumber manufactured during the past season was in advance of that manufactured during any previous year, and it is clear that the amount manufactured next year will show another large increase. The amount of lumber manufactured by the Ottawa mills during the past season is as nearly as possible 288,000,000 cubic feet. The greater quantity shipped has been sent to the United States, but almost all the coarsest grades were consigned to Montreal for home consumption. The principal destinations of the consignments to the United States were Burlington, Vt., Albany, New York and Boston. Excepting in a few cases where consignments were shipped via Montreal direct to England, but little export trade was done from Ottawa, save to the United States. A large proportion of the lumber sent to the United States has been exported thence to South America, the West Indies, Africa, and other foreign markets. The prices of lumber in the various markets fluctuate according to the freight charged from Ottawa, the lumber being sold there on a basis of about \$16 per thousand cubic feet, to be delivered on the cars or barges all freight charges to be borne by the purchaser. During the past season nothing has been done in square timber. Hardwood is not touched by Ottawa lumbermen except occasionally for private use.

THE LOCATING OF MACHINERY.

BY JOHN KANE, "OBSERVER."

OF the many people who purchase machines, there seems to be but few who give much thought to the matter of locating them. They will perchance cast their eyes to the line shaft, and see where they can most easily take out a length, put on a pulley to drive the machine in question, re-couple the shaft, place the belts and start up the machine; or they may select some part of the floor that has the most open space, forgetting all other considerations, and place the machine there. Again, others want a machine to stand at right angles to the line shaft, but not knowing how to lead the belts to the machine, give it up and do what they consider to be the next best thing, which may be entirely unsuited for the purpose intended. In either of these cases, as well as many others, the machines are a continual source of delay and trouble, costing a great deal more time and money to operate them as well as to get work to and from them.

I have seen a buzz or hand planer placed in the darkest corner of a shop, requiring a gas light almost all the time; I have also seen upright shapers so close to a wall that one-half of their work had to be done on the next one, thereby causing delay and extra cost of production. Again, I have known of large planing and matching machines so placed that all the lumber that passed through them had to be handled at least twice as much as it would have been if a little consideration and study had been done on the start.

A great part of the success of some establishments is largely due to the advantageous location of the various machines used therein. Light being absolutely necessary to the production of good work, it should be one of the first considerations. An illustration of this fact is had by comparing the amount of work performed by a man on a machine in good, clear daylight, with that done by the same man, on the same machine, while using gas or other artificial light (electric light is not taken into consideration here). Convenience in getting stuff to and from a machine is another important item. No machine that is tucked away in a corner, or has its surroundings of such a nature that extra exertion and work have to be employed to supply it, can do justice to its maker, operator, or owner; the machine may possibly do as much work but it will be at an extra expense.

Another important feature to be considered in locating a machine is that it should have plenty of room. It is neither pleasant nor profitable to have a saw-table and buzz planer so close together that every time either operator steps back with his work he is compelled to climb upon the other's back, neither is it just the thing to have a board running through a rip-sawing machine strike the mortising operator in the back, until he wishes the saw was at least three or four feet away in his rear. You see there is a good deal of backing to my arguments in favor of ample room. Why, I would give them plenty of room if only for the same reason that Mark Twain invented his scrap-book, viz: to save barrels of profanity.

Finally, a lot of machines should be so placed in relation to one another, that no piece of work would have to pass a machine without being operated on, if necessary. It is poor policy to have a machine operator pass his work clear to the other end of the shop for the next process, and then back to the middle of the shop, and so on through all the processes. I have in my eye an establishment that took lumber in at one end and brought the finished work out at the same door, and I can truthfully say that each piece that was cut up as it entered was carried up and down the whole length of the shop at least three times, and that, too, when there was not the least reason for so doing, as there was plenty of room and light everywhere. I said there was no reason for it; there was: the owners lack of studying and reasoning faculties when he started, and they have developed nothing better yet. After the stuff was sawn into lengths and widths, it would run against a boring machine, around a sandpapering machine, and under an upright shaper to reach the planer, when placed it would go through a like devious path to reach the buzz planer, and so on until it was taken to the finishing room. How they managed there I don't know, as I was glad to get out of the machine room, and considered that I had accomplished quite a feat with my big feet. It is needless to say that other concerns in the same line of business do not fear the competition in trade of such a shop as the one just mentioned. They have no need to; such shops are generally as untidy and wasteful as they are inconvenient. System is one of the fundamental principles of success, and is nowhere more clearly shown than in the locating of machinery.

In contra-distinction to the above class of shops, I would say that it gave me great pleasure to go through a large furniture factory not long since, upon the invitation of the superintendent, with whom I am well acquainted, and know that his great hobby is system. The machinery was so arranged that the lumber went in at one end and door, and out the other, almost as quickly as the boy who went through college in the same manner, with this difference, the lumber showed the results of "going through" by being a finished piece of work. It first went to the cut-off saw, thence to the ripping saw, then through the planing machine, afterwards to the jointing machine, band saw, scroll saw, or sand papering machine, as occasion demanded, but no unnecessary stops were taken, and there was no going back. Once started it went like clockwork, smoothly

and without friction. The same organized system extended, as a matter of course to all the different departments, and I can assure that any visitor to that factory will be favorably impressed with the *modus operandi*, no matter if he doesn't know a tenoning machine from a corn sheller. He will leave the premises with the impression that the brain having in charge the mechanical part of the work, understands the value of a system of locating machinery.

Not long since the writer had a part in supplying a factory that had been run on the good old hap-hazard plan, with some new machinery as it was being enlarged. An efficient mechanic who makes such things his special business, was employed to arrange and set the new works.

Look the situation over carefully, he began to dispose of the different machines in such a manner that they would do the most good, but after about two-thirds had been so arranged the owner came into the building and the new order of things was so entirely at variance with the old, that he ordered them changed. Expostulations and explanations were in vain; he must have them something like what they had been for the past fifteen years. The expert would not submit and he left. Well the machines were all re-arranged and two of them were so close together that the men could not work, and Mr. Owner ordered two feet to be sawn off a rip saw table before he would acknowledge his error, it then had to be moved and patched up before it could be used at all. Not long since this same factory caught fire by reason of their not having the exhaust fan properly put up, entailing a loss of several thousand dollars. This severe loss was caused by ignorance and obstinacy; hard words but true.

Machines are often required to be placed at right angles, or even at any angle to the line shaft for a matter of convenience, etc. This can easily be performed with the aid of a "mule pulley stand," a mechanical device but little known. It is far better for all ordinary purposes than bevel gears, and can be used to transmit power to almost any angle within the same plane or nearly so. It consists of a standard or column suspended from the ceiling at any point suitable to turn the belt. It is provided with two idle pulleys revolving on stems which are adjustable in any direction; it receives the belt from the line shaft and turns it round the corner to the countershaft at any angle; it is simple, reliable and noiseless and promises to take the place of many bevel gears. The first cost is much less than that of gears and it is easily put up by anyone.

Belt carriers are also a useful appliance for the transmission of power from one side of the shop to the other. They can be placed midway between the delivering and receiving point, and hold the belt up out of the way—in other words, take up all unnecessary "sag." They are made with a column hanging down from the ceiling and have two pulleys for upper and lower side of the belt revolving on spindles at right angles to the column or stand; they are also adjustable in any direction, thereby allowing the leading or direction of a belt, and they also save a long belt from excessive strain.

Indeed mechanical appliances for transmitting power in any direction are so numerous and varied, that with a little good judgment there is no valid reason why the art of setting up and locating machinery should not be thoroughly executed and machines conveniently arranged.

THE TIMBER TRADE IN QUEBEC.

THE annual timber circular of Messrs. J. B. Forsyth & Co., Quebec, has been published, and is as usual replete with information and statistics of very great value to the trade. In speaking of the present condition of the lumber trade Forsyth & Co. regret not being able to record much improvement either in an increased demand or an advance in prices. Regarding the markets in Great Britain, it is pointed out that although more hopeful accounts are occasionally heard, the figures of recent sales quoted show plainly these expectations have not as yet been realized. In tonnage an increase is noted in ocean steamships of \$3,428 tons over last season. This increase will effect trade more in Montreal than Quebec, the former being the port of destination. There has been a considerable decline in the number of sailing vessels, especially in those lumber laden and cleared for sea. The arrivals from the lower provinces are as usual on the increase.

The total supply of timber and deals has been very moderate, much below the average of the past five years, the shipments very light and the stock wintering fully up to the present average, if pine deals are excepted.

The supply of white pine, waney board, has been slightly in excess of last year, and the quantity now on hand nearly 700,000 feet more. The returns rendered to the Custom House do not discriminate as they should between square and waney, hence our export returns are wanting in this particular; the total shipment however of white pine shows a falling off this year of 2,223,480 feet. Choice waney has been in fair request all season; during the autumn prices stiffened and nearly every good lot now in stock, or to arrive early next spring, is controlled by the shippers. The slightly improved tone in the accounts from Great Britain, as well as the knowledge that this winter's production must be far short of previous years, are no doubt the chief reasons which have prompted buyers. It is a well-established fact that several of the heaviest operators are not manufacturing this season. It is also stated that old waney

has been entirely neglected, the heavy losses entailed in dressing, causing it to be most difficult to dispose of. Consequently the present stock contains a large quantity of this wood unsold, which has been lying over in the coves for two years or more.

The supply of square has been light, and the quantity now in the booms very slightly reduced from what it was last year. The manufacture is likely to be exceedingly small, and it is most desirable that it should be, for with the exception of a limited demand for square board-wood and deck-plank, other foreign woods are now extensively used, where at one time, white pine only was consumed. Nor can this be surprising to any person in the trade when we read in Messrs. Edmiston and Mitchell's circular of the 30th November last, that pitch pine of good quality 100 feet average, has been sold at 1s. to 1s. 1d. per foot according to quality. The now and increasing development of sawn pine for longitudinal has also materially curtailed the demand for common grades.

Few transactions occurred until about mid-winter when sales were effected, but towards the close of this season fresh wood, especially choice lots, were moved off without much difficulty at fair rates, and our market closed firm with a shade of an advance. Our stock contains many old rafts still on manufacturer's account as well as some small common wood for which there is but scant enquiry.

The quantity of Red Pine now wintering here is unprecedentedly light, owing to the diminished stock from 1885 and the small production last winter. The uncertainty of the demand is largely due the great depression in the Irish markets, which at one time absorbed this wood extensively.

Oak was rather difficult to place this year until the autumn, when a considerable number of sales were effected. The figures of supply and export are almost identical, about half a million feet under that of last season and the stock on hand slightly less.

The supply of elm has been light, the export about one half of what it was last season, and the stock heavier than it was supposed it would be. This wood has been dull of sale all season.

The supply and export of ash and birch have been limited. While the stock of the former is very light, and that of birch is heavier than usual.

Staves are depressed and there is little demand.

Under the head of pine deals, Messrs. Forsyth & Co., say: "There is a slight diminution in supply, export and stock wintering from last year's figures. This class of goods has been in fair request and held its own in prices during the season and we see no reason to fear that a reduction will take place; on the contrary, with an improvement in high class timber and a better feeling in the United States for lumber of choice quality, we may hope for better prices. It is, we think, evident that the import to this market of Michigan deals will next season be trifling if any. The shipments from Montreal continue to be heavy."

Under spruce:—"There has been during the last season a diminished shipping demand, resulting in the wintering stock exceeding that of last year by fifty per cent. In view of the heavy stock we would strongly caution our mill men against an over supply; this we are satisfied is the only line of action, and should a better feeling be developed in the trade of Great Britain, the value of this article next season may be enhanced."

Sawn lumber has been in fair demand, prices have ruled at \$7 to \$15 per 1000 feet b. m. for pine according to quality, and \$5.50 to \$10.50 for spruce. The shipments to South America have been heavy, to the Argentine Republic along it is estimated that nearly forty million feet b. m. of pine and spruce have been delivered from all Canadian Atlantic ports.—*Quebec Chronicle*.

Steamship Lines to Be Swallowed by the Great Railway Companies.

This seems to be the way things are going now. The great Inman line of steamers went into liquidation recently, and the International Navigation Company has made an offer to purchase the vessels and good will of the company. The first move in this scheme was made by Clement A. Griscom two years ago, when he advanced to the Inman Line money on about \$1,500,000 of debenture bonds then out. Soon afterward the agency of the Inman Line was transferred to Peter Wright's Sons, principal owners of the International Navigation Company. Later the Pennsylvania Railroad purchased the controlling interest in the International Company. There seems to be no doubt that the Pennsylvania Railroad and the Standard Oil Company will secure the ownership of the Inman Line. It is reported also that they wish to purchase the *Arizona* and the *Alaska*, now running on the Guion Line. The Inman Line has been in an embarrassed condition for some time. John Birely, the millionaire Manchester cotton spinner, owns the majority of the stock. The above reports, says the *Boston Manufacturer's Gazette*, appear in our New York exchanges, and, though not yet fully confirmed, are believed to be reliable.

Common lumber is worth \$14 to \$15 a thousand f. o. b. at Kewauit, and \$17.50 to \$18.50 at Winnipeg. Logging operations in both the Lake of the Woods and Lake Winnipeg district will be active this winter.

WANTED.

The publisher of THE CANADA LUMBERMAN desires to employ a competent correspondent at the following places:-

- Kingsston, Ontario.
Quebec City, Quebec.
St. John, New Brunswick.
Halifax, Nova Scotia.
Winnipeg, Manitoba.
Victoria, British Columbia.

The duty of each correspondent will be to give a review of his local market for the month preceding the date of issue, and the ruling quotations for different kinds of lumber, &c. For terms and any other information, address

A. G. MORTIMER, Peterborough, Ont.

QUEBEC STOCKS.

The following is a tabular statement of Quebec stocks on December 1st, 1894-5 G, and also the average on the same date from 1881 to 1885 inclusive.

Table with columns: DESCRIPTION, STOCK, 1884, 1885, 1886, Avg. of 5 yrs. 1881 to 1885. Rows include Oak, Elm, Ash, Birch, Tamarac, Square W. Pine, Waney, Red Pine, Pine Deals, Spruce Deals.

QUEBEC.

The shipping season here is now closed, the ss. Grassbrook being the last vessel outward, 26th inst.

During the season the total arrivals from sea numbered 432, or a shortage of 70 vessels and 55,191 tons as compared with last year. The steamships, however, show an increase over last year, being 43, or 83,428 tons, over and above the number of steamship arrivals last season.

It is announced that the Inter-colonial Railway have chartered the steamer Relief to run a winter ferry between their station at Lewis and the Canadian Pacific Railway at Quebec. If this is so, it will be a great help to the city of Quebec, and be the first step towards connecting the interests of the Inter-colonial and Canadian Pacific Railways, which it is hoped will soon be seen in conjunction by the building of a bridge over the St. Lawrence at Cape Rouge.

Lumbering operations are going on quite satisfactorily. The weather has been just the kind required, cold, with but little snow. If this weather continues logging operations will soon be over, as large gangs were sent into the woods early in order to take advantage of the log days.

With reference to spruce operations, about the usual quantity of logs will be manufactured. Spruce operations generally commence later than pine, consequently, very little work has been done in the spruce camps as yet.

Market.—Timber and deals.—No sales of timber have been reported this week, (but it is rumored that Wm. Little of Three Rivers, has sold his '86 cut of pine deals. Terms and prices not transpired.

From all we can learn the lumber business at this port has again been unprofitable to all concerned. From year to year those engaged in this trade have been depending upon some improvement, but so far it has been attended only by disappointment. Last fall our square timber manufacturers were inclined to hold their wood at very firm prices, but the business on the other side during the winter showed that there was no justification for this action on their part, as our shipping merchants had to face very dull times in making their contracts, and neither in volume nor in the prices realized was the business satisfactory. Oak was very dull of sale, and the same may be said of White Pine, with which Pitch Pine from the Southern Ports is now said to interfere very much. Elm, Birch and all Hardwoods were dull. This state of things was reflected on this side during the summer, and there were few transactions in the sale of timber except for small shipping parcels between merchants. In July we noted the sale of an old raft of 1882 lumber containing small Waney and square Pine of about 44 feet at 16 cts., and a choice Knapawa raft of 53 feet with a small portion of Waney Board 2 1/2 inch at 25 cents. During mid-winter a more than usual dullness prevailed, and it was not till the latter part of October that any little animation was shown, several rafts having changed hands that time, some choice lots of 55 to 60 feet selling at 25 cts. to 27 cts., according to quantity and size of Waney contained in each raft, as well as to quality of timber. Since that time lumbermen have been pressing sales a little, and a few choice rafts of White Pine changed hands at an advance in price. From all we can learn there is nothing in the Home markets to cause any great advance in price on this side, and the purchases that have been made here are doubtless with the object only of providing against possible

winter sales. Oak also was more largely dealt in late in the fall, probably for the reason that the supply is going to be so curtailed, and also that there is now a difficulty in obtaining the large fine wood that we used to get in such quantities some years ago. The probable production this winter will not be a million feet; the stock both here and in England is much lighter than usual, so that for this wood there is probably a better outlook than for any other kind. Pine deals have been in fair demand during the season at about last year's prices, but Spruce deals have been exceedingly dull of sale. The season closed in Great Britain in the gloomiest possible manner, and with several failures occurring to add to the general uneasiness.

The quantity of both Waney and square White Pine to be manufactured this winter will be much less than last year, and the same may be said of Elm and all other Hardwoods; including Birch of which hardly any will be made this winter as the manufacturers last year all lost money. Of Red Pine there is scarcely any in stock and the manufacturers only intend filling orders that have been contracted for for next season's delivery. Most of the manufacturers in the Ottawa district are turning their attention to Saw-Logs in preference to square timber. Very few saw-cams down this season, and our stove trade seems to be going to Southern Ports, as we hear of none being manufactured for the coming season.

Much inconvenience was caused to local mill men during the summer by the want of rain to float down their logs, and the manufacture of Spruce deals was in consequence very much curtailed. The season closes, we are sorry to say, with no very bright outlook for the future, and a recent suspension here, as well as similar events in Great Britain serve to add anxiety and disquietude to the general depression.—Chronicle.

TORONTO.

From Our Own Correspondent.

In regard to the markets here at present not much can be said. We are now into the holidays and trade is consequently quiet. Building operations have been carried on up to the present time, and the prospects are that as soon as the holidays are over building will begin again, and there is every indication that quite as much building will be done during the year coming as in the year past. Prices will continue to rule about the same as at present. Bill stuff will certainly be in demand, and there must soon be a rise in prices of long bill stuff. It looks as if dry lumber would be scarce in the spring, especially in the better grades. Altogether the prospects are good for next year's business, unless the manufacturers should order it by excessive stocking.

The following are the ruling quotations in this city at present:-

Table with columns: Item, Price. Rows include Mill cut boards and scantling, Shipping cut boards, Scantling and joist, Cutting up planks, Dressing stocks, Picks Am. inspection, Three uppers, Am. inspection.

Table with columns: Item, Price. Rows include 1/2 inch flooring, 1/2 inch rough, 1/2 inch dressed, 1/2 inch undressed, Beaded Sheeting, Clapboarding, XXX sawn shingles, Sawm Lath, White oak, Basswood, Cherry, White ash, Black ash.

OSWEGO, N.Y.

From Our Own Correspondent.

Table with columns: Item, Price. Rows include Three uppers, Pickling, Cutting up, Fine Common, Common, Culls, Mill run lots, Sidings, Mill run, 1x10, 13 to 16 ft., Mill run, 1x10, Selected, Mill run, 1x10, Selected, Mill run, 1 & 1 1/2 in. strips, Selected, Culls, 1x2 selected for clapboards, Shingles, XXX, 18 in. pine, XXX Cedar, Lath 1 1/2 No. 1, No. 2, Ash, 1st A and 1 1/2 in, Basswood, 1st & 2d, 1 & 1 1/2 inch, Hard Maple, Lath, Shingles, 1st, Shingles, 2nd.

CORDWOOD.

Table with columns: Item, Price. Rows include Long Maple, Long Birch, Long Beech, Tamarack.

BUFFALO AND TONAWANDA, N. Y.

BUFFALO, Dec. 22.—The advance in prices favorably received on the whole, and the wholesale trade in pine, with the prospects of an early spring, are feeling quite firm as to value. Tonawanda holders are likewise confident, and the rail trade holds up fairly well for the holiday season.

CARGO LOTS—MICHIGAN INSPECTION.

Table with columns: Item, Price. Rows include Three uppers, Common, Culls.

YARD PRICES—CAR LOTS.

Table with columns: Item, Price. Rows include 3 uppers, inch, Pickings, plank, Pickings, 1 1/2 in. to 2 in, Fine Common, Fine Common, thicker, Cutting up, Shelving, 12 in. and up, Coffin boards, 12 in. and up, Pressing stocks, Pressing shingles, Common stocks, Common shingles, Common box, Shingles, XXX, 18 in. sawed, Shingles, XXX 10 in. cut, Lath, No. XX do.

DETROIT, MICH.

The lumber market was steady last week and prices were unchanged. Receipts amounted to 250 cars and shipments to 31 cars. Prices are as follows:

Table with columns: Item, Price. Rows include Uppers, 4x4, 5" 6x4 & 8x4, 5" 4 in., Selects, 4x4, 5" 4, 6x4 & 8x4, Fine common, 4x4, 5x4, 6x4 & 8x4, Shoji, 4x4, 5x4, 6x4 & 8x4, Flooring, select common, No. 1 common, No. 1 fuel g., Roofing, D. & M., Siding, clear, A, B, C, Ceiling, select common, Ceiling, No. 1 common, No. 1 flooring, Stocks, 1x12 & 1x10, No. 1, 1x12 & 1x10, No. 3, Shipments, Mill cut, Lath stuff ordinary sizes, 12 to 16 ft., 18 to 20 ft., 22 to 24 ft., 26 to 28 ft., 30 to 34 ft., Shingles, 1 1/2 in. clear, 18 in. Ex, 10 in. clear, 18 in., 6 in. clear, 18 in., 6 in. stocks clear, Ex, 3 in., Lat., per M pcs., Add for S. T. 25c. S. T. M.

Market Reports.

MONTREAL LUMBER MARKET.

From Our Own Correspondent.

MONTREAL, Dec. 27.—As usual at this season of the year, the lumber market presents a quiet aspect, the demand having fallen off considerably. Business, however, under the circumstances has been good, and shows an increase of about 25 per cent. over December of last year, but a slight decrease as compared with November of this year. There are no changes to report in quotations, nor anything special to note in the market. The storage ground alongside the docks of theachine Canal just now is pretty well stocked with lumber belonging to various dealers for city consumption, and for early export in the spring.

The Liverpool timber circular of Messrs. Alfred Dobell & Co., dated December 1st says: "We have had another month of moderate imports, which has enabled merchants to deal with their yard stocks. With the exception of three, perhaps four vessels, the import from Quebec is over, and we do not on the whole consider that it has been a satisfactory season. Shippers as a rule have wisely refrained from burdening our market with consignments of timber, and it is to be regretted that the same restraint was not exercised in the case of manufactured lumber."

The following are the quotations at the yards here:-

Table with columns: Item, Price. Rows include Pine, 1st quality, Pine 2nd, Pine, shipping culls, Pine 4th quality deals, Pine, mill culls, Spruce, Hemlock, Ash, run of log culls out, Bass, Oak, Walnut, Cherry, Butternut, Birch, Hard Maple, Lath, Shing. ex, 1st, Shing. ex, 2nd.

Forsyth & Co's annual timber circular just issued by the Quebec Chronicle reports a falling off of 2,223,450 feet in the export of white pine from Quebec last season, of half a million feet in the export of oak, a limited export of ash, birch and red pine, and about half the usual export of elm. Of the stocks wintering there, it says there are about 700,000 feet more of waney white pine than last year, while the supply of square white pine shows a slight reduction, but the fact coupled with the prospect of a very small manufacture this winter is most desirable, as there is but a limited demand now for this wood, owing to the more general use of cheaper foreign wood, especially pitch pine for the same purposes. The stocks on hand, both of waney and square, contain many old rafts, which have been waiting sale for some years, as well as some small common wood, for which there is but scant enquiry. Under the head of pine deals, the circular says there is a slight diminution in supply, owing to the diminished shipping demand last season. The wintering stock of spruce deals exceeds that of last year by 50 per cent, and in view of this heavy stock, mill men are extremely cautious against manufacturing an ever supply, as this is the only safe policy, and the value of these goods next season may be enhanced should a better demand be developed in the British trade.

ADVERTISEMENTS

Those wishing to BUY or SELL TIMBER LANDS, LUMBER or SECOND HAND MACHINERY will find THE CANADIAN LUMBERMAN an excellent medium in which to make known their wants. Advertisements of this character will be inserted at the low rate of 1 CENT A WORD, cash to accompany the order in every case. Address.

A. G. MORTIMER, Publisher, Peterborough, Ont.

ALBANY.

| | | | |
|--|-------|----|----|
| Pine, clear, 4 M. | 25 00 | 00 | 00 |
| Pine, fourths. | 50 | 00 | 00 |
| Pine, selects. | 42 | 00 | 00 |
| Pine, good box. | 25 | 00 | 00 |
| Pine, common box. | 13 | 00 | 00 |
| Pine, 10-in. plank, each. | 00 | 25 | 00 |
| Pine, 10-in. plank, culls, each. | 00 | 25 | 00 |
| Pine, 10 in. boards, culls. | 00 | 16 | 00 |
| Pine, 10-in. boards, 1 ft. | 28 | 00 | 00 |
| Pine, 12-in. boards, 1 ft. | 23 | 00 | 00 |
| Pine, 12-in. boards, 1 1/2 ft. | 23 | 00 | 00 |
| Pine, 1 1/2 in. siding, select. | 40 | 00 | 00 |
| Pine, 1 1/2 in. siding, common. | 15 | 00 | 00 |
| Pine, 1-in. siding, select. | 13 | 00 | 00 |
| Pine, 1-in. siding, common. | 09 | 00 | 00 |
| Spruce, boards, each. | 20 | 00 | 00 |
| Spruce, plank, 1 1/2 in., each. | 00 | 00 | 00 |
| Spruce, plank, 2 in., each. | 00 | 12 | 00 |
| Spruce, wall strips, each. | 00 | 00 | 00 |
| Hemlock, boards, each. | 00 | 00 | 00 |
| Hemlock, joist, 4 in., each. | 00 | 00 | 00 |
| Hemlock, joist, 2 1/2 in., each. | 00 | 00 | 00 |
| Hemlock, wall strips, 2 1/2 in., each. | 00 | 00 | 00 |
| Black walnut, good, 4 M. | 100 | 00 | 00 |
| Black walnut, 4 in. | 80 | 00 | 00 |
| Black walnut, 3 in. | 00 | 00 | 00 |
| Scaymore, 1-in. | 25 | 00 | 00 |
| White wood, 1-in. and thicker. | 35 | 00 | 00 |
| White wood, 1-in. | 28 | 00 | 00 |
| Ash, good, 4 M. | 40 | 00 | 00 |
| Ash, second quality, 4 M. | 25 | 00 | 00 |
| Cherry, good, 4 M. | 60 | 00 | 00 |
| Cherry, common, 4 M. | 25 | 00 | 00 |
| Oak, good, 4 M. | 40 | 00 | 00 |
| Oak, second quality, 4 M. | 20 | 00 | 00 |
| Basswood, 4 M. | 25 | 00 | 00 |
| Hickory, 4 M. | 40 | 00 | 00 |
| Maple, Canada, 4 M. | 28 | 00 | 00 |
| Maple, American, per M. | 28 | 00 | 00 |
| Chestnut, 4 M. | 38 | 00 | 00 |
| Shingles, shaved, pine, 4 M. | 0 | 00 | 00 |
| " 2nd quality. | 0 | 00 | 00 |
| " extra, sawed, pine. | 4 | 00 | 00 |
| " clear. | 0 | 00 | 00 |
| " cedar, mixed. | 0 | 00 | 00 |
| " cedar, XXX. | 0 | 00 | 00 |
| " hemlock. | 2 | 50 | 00 |
| Lath, hemlock, 4 M. | 0 | 00 | 00 |
| Lath, spruce. | 0 | 00 | 00 |

BAY CITY AND EAST SAGINAW.

The Saxe mill at West Bay City manufactured 39,000,000 feet of lumber this year. A. & E. Wilson, of East Saginaw, will carry over 2,500,000 of lumber at St Ignace.

C. L. Grant & Co., East Saginaw, manufactured 5,000,000 feet of lumber the past season.

The mill of C & E Ten Eyck, East Saginaw, manufactured 19,547,750 shingles the past season. The amount of sold lumber on the Saginaw river is larger than manufacturers have supposed.

Reported that Mosher & Fisher paid \$107,000 for 20,000,000 feet of timber they purchased in Clara County.

E. R. Poinney, of East Saginaw, manufactured 6,000,000 shingles the past season and carries none over.

Green & Stevens, Bay City, cut about 15,000,000 feet of lumber this last season at their mill on Stone Island.

The N. & A. Bernagel Lumber company, Saginaw manufactured 3,500,000 of hemlock lumber the past season.

The annual exhibit of the amount of the lumber and other forest products shipped by water from the ports of Bay City and East Saginaw during 1886, show that the total amount of lumber shipped during the year is less by 71,810,000 feet than the output in 1885, and is the smallest since 1878. The cause of the falling off says the *Lumberman's Gazette*, is in part the lesser production of the river, but perhaps more is due to the increase of shipments by rail, which now amount to about 15 per cent. of the cut. The advance in freights in the latter months of the season no doubt had some effect in retarding shipments. When there was a scarcity of tonnage after the ice took place, and as the shipping did not begin until May 1, the season was shorter than usual. The output of shingles was also smaller than in any year since

1876. Freight rates were much higher during 1886 than in 1885; indeed equal rates have not been reached for several years. Rates opened at \$1.50 from Bay City and \$1.62 1/2 from Saginaw to Buffalo and Tonawanda and \$1.25 @ 1.37 1/2 to Cleveland and other ports. About the 1st of September an advance of 25 cents was made and later on was added and closing rates were \$2.75 @ 2.87 1/2 to Buffalo and Tonawanda and \$2 @ 2.25 to Ohio ports.

The *Lumberman's Gazette* of the 22nd Dec. says:—Actual transactions in lumber during the past week have been very few in number, although there has been considerable inquiry about et cetera and prices by letter. Manufacturers here have settled down to the fact that there will be very few sales until after the holiday season shall have passed. There is no indication of any prospective change in prices, and the probability is that present quotations will rule for the opening of operations for the season of 1887, and that the season will be fairly brisk and satisfactory. The opinion exists that the stock on the river will be very materially reduced before the opening of navigation by rail shipments, which are visibly on the increase and which it is thought will be larger next season than they have ever been heretofore for several reasons which might be named, but the principal one of which is said to be the action of the Buffalo and Tonawanda lumber men, who resolved at their last meeting to purchase no more lumber on the Saginaw river by straight measure. It is claimed by some of the heaviest operators here that this action will induce more shipments by rail to its final destination, and that this business will be more sought after in the future, unless the action of the lumbermen alluded to is reconsidered and rescinded. Whether such a result will be accomplished or not is a question which time alone can settle.

Mill owners here who have the timber are bustling in their stock for next season with all possible despatch and indications point strongly to the fact that the cut of 1887 will fully equal that of 1886.

The quotations published below give the outside figures on inspected lots and there is considerable lumber on the docks and in sight, which is held at from \$21 to \$25 straight, although there is abundance at lower figures:—

| CARGO QUOTATIONS. | |
|-----------------------------------|-------|
| Shipping culls | 3 50 |
| Common | 15 00 |
| Suppers | 37 00 |
| Bill stuff | 8 50 |
| Norway bill stuff | 8 50 |
| Under straight | 0 24 |
| Measure | 3 10 |
| Shingles XXX | 2 00 |
| Shingles, clear butts | 1 75 |
| White pine lath | 1 75 |
| YARD TRADE. | |
| Suppers wide and thick | 43 00 |
| Do. 1 in | 35 00 |
| Felects | 27 00 |
| Fine common | 20 00 |
| 1, 1 1/4, 2 in. cut ups | 35 00 |
| No. 1 base, 7, 8 and 9 in selects | 27 00 |
| No. 2 do. (fine common) | 40 00 |
| No. 1 for strips | 27 00 |
| No 2 | 17 00 |
| No. 3 | 12 00 |
| Fencing, coarse common | 4 00 |
| Fencing, mill culls | 14 00 |
| No. 1 stock 12 in. | 11 00 |
| No 2 stocks | 12 00 |
| Wide common | 9 00 |
| Piece stuff and timber | 9 00 |
| 12, 14, 16, 18 ft. | 12 00 |
| Do. do. 20 ft. | 1 50 |
| Lath No. 2 (1) | 1 00 |
| Shingles XXX | 3 15 |
| Clear butts | 1 90 |

CHICAGO.

Predictions which have been made along back, to the effect that the new year would open with fully 75,000,000 feet less lumber on hand in Chicago than was held at the beginning of 1886, seem likely to be more than realized. The report of the secretary of the Lumberman's Exchange for December, which has just been issued, makes the decrease from last year of the amount in pile, 72,972,753 feet, the totals being 608,416,940 feet for 1886, and 681,389,703 feet for 1885. There is also on hand 31,807,477 feet in the yards at South Chicago, against 53,911,525 feet that was held last year, which, as that district is really a part of the Chicago market, ought to be included in the stock at this point. Adding these figures, the totals become 642,221,417 for 1886, and 736,301,228 feet for 1885. This raises the shortage as compared with last year to 92,076,811 feet, which it must be ad-

mitted, even by those who can see no pronounced scarcity of lumber anywhere, to be a very respectable quantity. There is every reason to suppose that the difference is increasing, as the receipts have fallen off this month, while the probability is that shipments and the local consumption have been on a rather larger scale. It is likely now that the supply in pile at this will, by the close of the month, show more than the 75,000,000 deficit predicted, and, including the South Chicago, the shortage will probably over-run 100,000,000 feet. The shingle stock has increased during the month, which fact is more likely due to diminished sales than increased receipts. The lath supply shows a diminution that is remarkable, the shortage having more than doubled during November. At this rate of decrease it would not take long to run many yards out of this stock altogether. Between Dec. 1, 1885, and April 1, 1886, the quantity of lath on hand declined about 57,000,000 pieces. A similar decrease the present winter would not leave lath enough in market to give half a dozen yards a decent stock. Take it altogether, the December statement shows that the local trade is full warranted in maintaining a firm front in respect to prices, and will be justified later in making a liberal advance.—*Timberman's Piece Stuff*, short green..... 8 25 @ 9 50
Piece stuff, short dry..... 10 50 11 00
Piece stuff, long..... 11 00 14 00
Boards and strips, No. 2..... 11 00 @ 13 00
Boards and strips, medium..... 12 00 15 00
Boards and strips, No. 1..... 15 00 20 00
Shingles, standard..... 2 00 2 10
Shingles, extra..... 2 25 2 40
Shingles, cedar, standard..... 1 05 1 75
Shingles, cedar, extra..... 1 90 1 95
Lath, white pine..... 1 50 1 60
Lath, Norway..... 1 40 1 50

RECEIPTS FOR WEEK ENDING DEC. 23.

| Lumber. Shingles. | |
|-------------------|-------------------|
| 1886..... | 6,689,000 203,000 |
| 1885..... | 4,670,000 603,000 |

FROM JAN. 1, TO DEC. 23, INCLUSIVE.

| Lumber. Shingles. | |
|-------------------|---------------------------|
| 1886..... | 1,053,043,000 774,961,000 |
| 1885..... | 1,700,071,000 774,311,000 |

STOCK ON HAND DEC. 1.

| 1886. 1885. 1884. | |
|-------------------|-------------------------------------|
| Lumber..... | 608,416,940 681,389,703 660,938,272 |
| Shingles..... | 68,705,943 411,014,818 336,700,492 |
| Lath..... | 3,504,310 99,851,115 68,045,506 |
| Pickets..... | 1,012,259 2,610,061 2,335,558 |
| Cedar posts..... | 267,740 525,221 671,064 |

EASTERN FREIGHT RATES.

FROM CHICAGO AND COMMON PORTS ON CAR LOAD LOTS OF HARD AND SOFT LUMBER.

| | |
|------------------------|------|
| To New York | 22c. |
| Boston | 30c. |
| Philadelphia | 25c. |
| Baltimore | 22c. |
| Washington | 22c. |
| Albany | 21c. |
| Troy | 24c. |
| Buffalo and Pittsburgh | 15c. |
| Shenectady | 24c. |
| Wheeling | 15c. |
| Suspension Bridge | 15c. |
| Salamanca | 15c. |
| Black Rock | 15c. |
| Dunkirk | 15c. |
| Erie | 15c. |
| Toronto | 15c. |

LAKE FREIGHTS.

| | |
|-----------------------|---------------------|
| From Muskegon, green | 1 62 1/2 |
| From Whitehall | 1 62 1/2 |
| From Lullington | 1 75 |
| From Manistee | 1 37 1/2 @ 1 57 1/2 |
| From Menominee, dry | 2 00 |
| From Menominee, green | 2 00 |
| From Cheboygan | 2 00 |
| From Bay City | 2 00 |
| From Oscoda, dry | 2 75 |
| From Alpena, dry | 2 50 |

LONDON, ENG.

We take the following extract from a London contemporary: The state of trade, though on the whole progressing favorably, still vacillates a good deal, and while one manufacturer acknowledges improving business, another will tell you he never knew it so bad. In the timber trade the waiting game seems still in favour, both abroad and at home. Neither side likes to be very demonstrative, but both are ready to negotiate if, literally, the ice were broken between them. During the last few days some activity in buying from the docks appear to have been displayed by London merchants, as we learn that several parcels have changed hands by private contract, thus indicating that buyers do not entirely trust to the public sales. In these cases we believe sellers have obtained the prices at

which they intended to hold the goods for some time. We are glad to note that the advices received from the north-eastern shipbuilding centres continue to read encouragingly. From Sunderland, for instance, a port where the depression of trade has, perhaps, been more severely felt than in most other places, further improvement is discernible both in the shipbuilding yards and engineering works. Additional repairing contracts have been concluded and new steamships are being laid down, while the ironworks and forges are reported to be better supplied with orders than has been the case for many months.

MIRAMICHI AND DALHOUSIE SHIPMENTS.

The shipments of deals, timber, &c., from Miramichi and Dalhousie for the season just closed were as follows:—

MIRAMICHI.

| Shipper vessel ton. | | Super feet deals, boards. | Tons scant. hich pine. |
|---------------------|----|---------------------------|------------------------|
| J. B. Snowball | 46 | 24,728 | 20,238,866 1,105 158 |
| N B Trading Co | 37 | 23,721 | 18,072,273 365 — |
| Geo. McLeod | 27 | 15,495 | 14,359,000 — — |
| Ritchie & Co. | 20 | 50,979 | 9,961,354 6 150 |
| W. M. McKay | 6 | 3,271 | 2,959,516 — — |
| Burchill & Sons | 4 | 2,807 | 2,617,000 — — |
| E. Hutchison | 3 | 1,667 | 1,596,638 — — |
| A. Morrison | 2 | 916 | 856,000 — — |
| Chas. Sargeant | 1 | 598 | 515,600 — — |
| John McLaggen | 1 | 576 | 463,972 — — |
| Wm. Richards | 1 | 850 | 636,172 — — |

In addition to the above palings were shipped as follows:—

| | |
|-------------------------|----------------|
| By J. B. Snowball | 1 411 890 pcs. |
| By N. B. Trading Co. | 1,327,673 pcs. |
| By D & J. Ritchie & Co. | 170,600 pcs. |

DALHOUSIE AND CAMPBELLTON.

| Vessels. Tons. Deals, &c. birch, pine. | |
|--|---------------------------|
| R. & J. Stewart | 9 8 300 7 219,073 |
| G. M. Hat & Co. | 11 6 132 5 119 924 329 59 |
| J. P. Mowat | 4 1 626 1 044 926 58 524 |
| John McNair | 5 1 391 1 260 606 10 41 |
| Henry O'Leary | 5 1 333 1 063 948 — — |
| Viney Bros. | 2 1 049 997,000 — — |
| J. D. Sowerby | 3 3 040 860 897 168 7 |
| Geo. Dutch | 2 1 821 788 722 9 2 |
| Arch. McNair | 1 2 25 260 223 — — |

Totals 42 21 947 18,615,319 574 633
Messrs. R. A. & J. Stewart shipped also 203,000 staves.
Mr. Hy. O'Leary shipped also 230,000 lbs.

BLACK BIRCH.

The price of black birch of best quality has recently gone up from \$7 to \$9 1/2 per 1,000. The extraordinary advance is due to the discovery that boards cut out of the first logs are susceptible of a very high polish, and can be used for almost any purpose hitherto exclusively reserved for mahogany, which is worth about \$250 a thousand. The advance has been expedited by the discovery that the best black walnut is giving out. Black walnut from Kansas and the south is so porous that it is of very little use in furniture making. The best black birch found almost exclusively on the barren copper ore regions between Milwaukee and Ashland, where all other timber is stunted in growth and very poor. Here boards out of the butt cut quickly assume a beautiful red tint on being exposed to the atmosphere, and can be polished up to a great degree of fineness. The price will soon fall to \$50 or \$60 a thousand, as a railroad is being laid right through the very inaccessible region where it grows, and the high prices have tempted several men to open out saw-mills. Red birch has also advanced in price very rapidly. It could be bought up recently in Indiana and Ohio for the bare cost of sawing, but now it is worth \$30 a thousand.—*Lumberman's Gazette*.

The wood-working establishment of Messrs. Wm. Cane & Sons, Newmarket, had a narrow escape from complete destruction by fire on Dec. 14th. It will be remembered that this firm sustained a very heavy loss by fire a couple of years ago.

Correspondence.

To the Editor of the Canada Lumberman.

Would you or some of your readers enlighten me regarding a question which is of considerable interest to owners of water-power saws mills and others? I have often heard my father say that he had often noticed the fact that a water mill would run much stronger at night with the same head of water than in the day. For many years he was an engineer in a paper mill when the same machinery was used continuously day and night to grind paper pulp. This would seem to me a fair and conclusive condition as not subject to the fluctuations and interruptions as in a saw mill. He said the mill ran more evenly, or steadily, stronger, and with more revolutions than in the day. He did not know the cause but attributed it to the atmosphere.

W. B. A.

[We shall be pleased to receive a solution of this problem from any of our readers, which will be given in the next issue of the LUMBERMAN.—ED.]

WHITEMOUTH, Man., Dec. 22nd, 1886.

To the Editor of the Canada Lumberman.

Below you will find a list of the quantities of the various kinds of timber to be cut in the woods about Whitemouth, this winter, on the C. P. R. east of Winnipeg:

G. W. Strovel, 300,000 ties; J. G. Dennison & Co., for C.P.R., 100,000 ties; William Skead & Co., for C.P.R., 100,000 ties; Mr. Ferguson, for C.P.R., 60,000 ties; McRissay & Co., for C.P.R., 20,000 ties; Gibbons & Livingstone, 20,000 ties; David Ross, 3,000,000 feet of logs; P. Enwright, wood king of Winnipeg, 4,000 to 8,000 cords; A. C. Smith, 3,000 cords wood; McRissay & Co., 3,000 cords wood; Mr. Hargrove, 2,000 cords wood; Mr. Goodenue, 2,000 cords wood; besides many other small operations.

The above will show your readers that Manitoba is not yet dead. The wages in the log camps is from \$20 to \$45; in log camps, \$20 to \$26 and board. In wood camps workmen make from 30 cents to \$1 per cord for cutting, and pay \$4 per week for board.

Working men are in good spirits, as their pay is good, and the weather excellent for working.

LUMBERMAN.

MADAWASKA, N. B., Dec. 22nd, 1886.

To the Editor of the Canada Lumberman.

Lumbermen so far have had a beautiful season and the output will exceed that of last year, unless deep snow sets in, which seems to threaten now, as we already have two feet in the woods. The estimated cut is 7,000,000 feet from the mouth of Tobique to Victoria, up to Grand River, Madawaska, and from that point to St. Francis about 2,000,000 more.

On the American side, Messrs. Coulff, Connors, Stephens, Eatons, Dickley and others, are doing a heavy business, and owing to our export duty, not being enforced here in Madawaska, Americans are yearly manufacturing forty million shingles, besides other lumber taken out of our forests. In this case our National Policy is giving Americans a premium of the import duty, to slaughter our forests and allow our local mills to lie idle. Holmes & Hammond are now building shingle mills to increase the slaughter, so that in a few years our stocks will be nil.

Our enterprising townsman, Mr. G. V. Hammond, is doing a heavy business in spruce logs, sleepers and shingles, but our staple article is lumber, and so long as the Dominion Government pursues a policy to encourage American citizens to slaughter it, it is poor encouragement for a New Brunawicker to invest his money, and try to build up his country out of it.

P. O. BYBAM.

OTTAWA, Dec. 26th, 1886.

To the Editor of the Canada Lumberman.

While wishing you the compliments of the season, I must also congratulate you on the marked improvement you have already made in your paper—THE CANADA LUMBERMAN. So far as my knowledge goes, lumbermen in the past have been of the opinion that the paper was not up to the mark, and if you will pardon a plain expression, not worthy of the extensive industry it claimed to represent. Of late, however, I have heard many of our leading lumbermen speak very highly of the efforts you are making towards supplying the trade with a first-class journal, and I am safe in saying that one and all will give it a hearty support.

There is one important matter to which I desire to call attention, and that is the little interest manifested by the general reader in regard to correspondence. We, as lumbermen, like all other representative business men, have our grievances. Sometimes they are against the Government, sometimes against the railways, and sometimes against the general public, and unless these grievances are brought to light and discussed through the medium of the press, how can we ever expect to have our wrongs redressed? Now, Mr. Editor, I know that at the present time lumbermen have grievances of paramount importance, and through the existence of such, a very large amount of money is being annually lost to the trade. It is of

personal interest to every man to adopt some means to protect his business from loss, and my suggestion is that all matters of this nature should be discussed, *pro* and *con* through the columns of the LUMBERMAN.

In addition to this there are many other matters pertinent to the manufacture and sale of lumber, which might well be taken up in this way, and I hope that the many intelligent and thinking men who are engaged in this business, will devote an hour now and again to the work of putting their ideas on paper, and by so doing not only benefit themselves individually, but the trade in general.

I have written this, Mr. Editor, simply as an introduction, and will in a future issue endeavour to give you something calculated to stir up the dry bones, as it were, and bring forth discussion.

Hoping that the next issue of the LUMBERMAN may contain many letters of interest.

Yours truly,

CHIF.

GRAVENHURST, Dec. 10th, 1886.

To the Editor of the Canada Lumberman.

The mills here and in the vicinity have all shut down, mainly owing to the frost, but a considerable number of logs are held for spring operations. It may not be uninteresting to give you a short statement of the mills here.

G. W. Taylor & Co.'s gang mill, cut about seven million feet of lumber for the Ontario Lumber Co. Joseph Tuers single circular mill, cut bus and one-half million lumber and one million of shingles for Mr. J. Collins, of Bracebridge, and three million of shingles for Thomson & Baker of this place.

McBurney & Co. (one circular mill) cut about five million feet of lumber and two million of lath. Chas. Mickles three mills (each one circular) cut ten millions ft. lumber, five millions shingles, and about three millions laths. Isaac Cockburn's (two circular mill) cut about five millions feet lumber, five millions shingles, and two million of lath. J. H. Hull's shingle mill cut nine millions of shingles with 3 machines. Thomson & Baker (one circular mill) cut 4½ million lumber, 3½ million shingles and two million of lath. L. B. Hill's shingle mill cut about two millions of shingles. Thomas B. Tait's shingle mill (2 machines) cut nearly eight millions of shingles; and James King's (one circular mill) cut about one million ft. lumber and two millions of shingles. This I believe covers the mills in the town.

In the vicinity James Harvey's mill in Draper, cut about three millions lumber and three millions shingles. Tasker's mill at Reay, also in Draper, cut one and a-half millions lumber and one and a half millions shingles. H. De Blaquen's mill, just nicely started, has cut about a million of shingles, and will run on bill stuff and shingles all winter. J. H. Hull's mill, (one circular) at Lethbridge, cut about two millions of lumber and one million shingles and lath. J. I. Clark's mill, also at Lethbridge, has cut three and a quarter millions shingles. At Bracebridge, Brown & Sheers mill cut about five millions shingles and half million lumber; and Leishman & Perry's mill about one million lumber and a lot of shingles. Besides the above there is shipped from here several millions of lumber and shingles, cut in mills round Lakes Muskoka, Joseph and Rousseau. The year has been a successful one. The stocks cut by the different mills are all sold, and about half shipped. No dry lumber can be got here next year if the shipping goes on all winter as briskly as now. No large stock of shingles except Mr. Thomas B. Tait's is held here.

All in the trade are hopeful for good demand and a small advance next year.

Large stocks are being got out in the woods and are all well on with the work.

Wages in the woods are ten per cent. higher than last year. The prices of logs on the river is twenty per cent. higher than last year, six dollars being freely paid now for extra logs.

The old De Blaquen mill will be run by Thos. Tait this year he having purchased same.

Thomson & Baker intend putting in a band saw in there mill here.

Sheers has purchased the interest of Mr. Brown, his partner in the Bracebridge South River mill, and Mr. Leishman has purchased the interest of his partner, Mr. Perry, in the north river mill.

I. J. McNeil has purchased a berth in Bethune from Mr. T. Maxwell, paying, we understand, \$16,000 for same.

Mr. Hugh Brown, of Utterton, has purchased the limits in the Township of Stephenson, from the Bank of Toronto, for \$2,000.

Several small transactions in timber lots at large prices are reported.

Mr. Waldie, the purchaser of the Victoria harbor limit from Mr. Power of Barrie, was up getting himself initiated into the mysteries of log cutting and shanty life. A little bush life won't do him any harm. He is putting in a band saw in the mill at Victoria Harbor. We wish him success.

A correspondent wishes to know if any one can give him a statement of the case of Dymont vs. Thomson and the principle involved of interest to the trade.

Yours truly,

FRANCIS BAKER.

FROM THE LUMBER REGIONS.

MINNEAPOLIS, Minn., Dec. 1.—The saw-mills have closed down after having the shortest season on record, being one month to six weeks less than last year. As a result, 50,000,000 feet more lumber was sawed in 1885 than during the past season. This season the total cut of lumber was 262,636,019 feet; of shingles, 80,725,000 feet; of lath, 55,264,800 feet. In 1885 the cut of lumber was 313,998,166 feet; shingles, 101,857,750 feet; lath, 82,175,817 feet; the decrease is 51,362,147 feet of lumber, 20,932,760 feet of shingle, and 26,911,017 feet of lath. The Surveyor-General's scale shows that 237,891,540 feet of logs were turned through the boom during the year. This is 51,000,000 less than last year; and it is due to the delay in the beginning of the season. In 1885 79,503,520 feet had been turned through the boom up to July. In 1886 but 30,968,730 feet had been run through up to that time. There are now 12,000,000 feet of logs in the mill ponds and 10,000,000 feet in the booms. Above Sauk Rapids there are about 11,000,000 feet. It is not probable that the mills will be enabled to commence operations any earlier next season, but they will have plenty of logs when they start up, and the cut will be largely increased. It is estimated that the stocks in the lumber yards amount to 175,000,000 feet, against 264,500,000 in 1885.

EAST SAGINAW, Mich., Dec. 1.—For several months past lumber dealers and mill men of the Saginaw Valley have been busy arranging a scheme which promises to work a revolution in the lumber business of the West. The scheme is to make the Saginaw Valley the great central distributing point of assorted lumber. Since the infancy of the industry here the practice has been to pile on the docks the cut of the mills without sorting, thus giving a great profit to the middlemen. Sold in the rough it was finished in the planing-mills of the purchasers, who thus reaped a large profit that was lost to the capital and labor of the valley. This profit amounted to hundreds of thousands of dollars, and to keep this money in the valley has been an object long aimed at, and led to the establishment in the last five years of sorting yards and planing mills. The project has for its object the purchase of the entire cut of the valley; to be stored in and sold from the sorting yards here.

THE MANUFACTURE OF CANOES.

In Eastern Canada row boats are not in popular favor, the majority of people who paddle our rivers and small lakes either for pleasure or business, preferring the light canoe rather than the more burdensome article just mentioned. We had the pleasure a few days ago of visiting the works of the Ontario Canoe Co., situated in the village of Aashborough, directly across the river from the town of Peterborough. We were kindly received by the managing director, Mr. J. Z. Rogers, and conducted through the different buildings belonging to this company. On enquiry we found that the main factory was 30x65 feet in size, four stories high, adjoining which is another building, two stories high, in which is contained the offices of the company and storage rooms for the product of the factory. Another building, larger than any of the others, is also utilized for a show room. Here we find almost every variety of canoe, with and without rigging, arranged conspicuously so as to represent them as they appear in the water.

The models used by this firm are noted for their beauty and speed. They carry good wide bearings, and carry them well forward, but not so as to interfere with their speed. All canoes undergo a practical test before leaving the works, and nothing but the best material which can be procured, is used in their construction. During our visit to the works we were shown an open cedar rib canoe, built last year, which weighs 12½ pounds, complete with decks and thwarts, capable of carrying 450 pounds. It is a beauty, and is an indication of what can be accomplished by Canadian boat builders. Nearly two hundred different kinds and sizes of canoes are built, enough surely to satisfy the tastes of the most scrupulous. This company were awarded a silver medal at the Antwerp exhibition, and at every other point where they were shown a prize was given. At the present time the works are running to their fullest capacity, filling orders, principally for the English market.

MEN OF 24,000 YEARS AGO.

If the claims of old descent were a justifiable source of pride, the human race would feel elated this morning on being assured by the wise men of the British Association that authentic proof had been discovered in some Welsh caves, that men, sufficiently developed from the ape to manufacture flint implements, existed on this planet 24,000 years ago. To us it is a melancholy reflection that we should have taken so prodigious a time to attain so small a result. Even when the duration of the race is limited to the six thousand years of history, the outcome can hardly be considered as satisfactory, and there is something profoundly depressing in the sudden addition of a series of ancestors who spent 234,000 years in marking time, indeed, but in making no other mark in the world.—*Pall Mall Gazette*.

The Customs authorities have refused to grant the application made by Detroit residents to be allowed to tow pine logs in rafts to the Canadian side of the Detroit river, and remove them in such quantities as may from time to time be required.

MR. MOWAT SUSTAINED

The Returns as far as Known—Gains and Losses on Both Sides.

The following are the returns of the Provincial elections as far as they can yet be obtained:—

Table with columns: Constituency, Members, Opp, Aftn. Lists results for various constituencies under 'BY ACCLAMATION', 'BY STATUTE', and 'BY ELECTION'.

Perhaps the most extraordinary that success has been achieved in modern science has been attained by the Dixon treatment for Catarrh. Out of 2,000 patients treated during the past six months, fully ninety per cent. have been cured of this stubborn malady.

Another result of the construction of the C. P. R. railway is the commencement of a lumber trade from British Columbia. The first car-load left New Westminster on the 22nd November arriving in Montreal on the 9th of December and was delivered to its destination on Saturday.



Notice to Contractors

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Midland Harbor Works," will be received until Tuesday, the 25th day of January, 1887, inclusively, for the construction of Works at Midland, Simcoe County, Ontario, according to a plan and specification to be seen on application to the Engineer, Midland Division of the Grand Trunk Railway, Peterborough, and at the Department of Public Works, Ottawa, whose printed forms of tender can be obtained.

Department of Public Works, Ottawa, 24th December, 1886. 3d153



CAPE BRETON RAILWAY.

SECTION—GRAND NARBROWS TO SYDNEY. TENDERS FOR THE WORKS OF CONSTRUCTION.

SEALED TENDERS, addressed to the undersigned and endorsed "Tenders for Cape Breton Railway," will be received at this office up to noon on Wednesday the 12th day of January, 1887, for certain works of construction.

By order, A. P. BRADLEY, Secretary. Department of Railways and Canals, Ottawa, 14th December, 1886

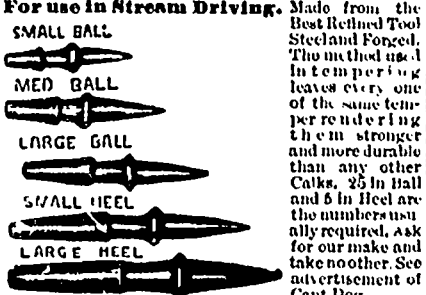


NOTICE.

TENDERS will be received at the Department of Inland Revenue until Noon on Monday, 3rd January, 1887, from parties desirous of leasing the privilege of ferrying across the River Ottawa, between Fitzroy, in the County of Carleton, in the Province of Ontario, and Ontario in the County of Pontiac, in the Province of Quebec, in accordance with the terms and under the conditions set forth in the Regulations copies of which can be procured from the Inland Revenue Department at Ottawa.

Each Tender must state the amount which the party tendering is willing to pay per annum for the privilege referred to, which amount will be payable in advance, the terms of the lease being for five years from the first of May, 1887.

LUMBER DRIVER'S CALKS,



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J. McAVITY & SONS, ST. JOHN, N. B.



NOTICE

TENDERS will be received at the Department of Inland Revenue until noon of Monday, the 3rd January 1887, from parties desirous of leasing the privilege of ferrying across the River Ottawa, between La Passe, in the Province of Quebec, and Gower Point, in the Province of Ontario, in accordance with the terms and under the conditions set forth in the Regulations, copies of which can be procured from the Inland Revenue Department at Ottawa.

Each tender must state the amount which the party tendering is willing to pay per annum for the privilege referred to, which amount will be payable in advance, the terms of the lease being for five years from the 1st May, 1887.

W.M. HIMSWORTH, Secretary. Department of Inland Revenue, Ottawa, 14th December, 1886.



Over One Million Sold. Most complete book of its kind ever published. Gives measurement of all kinds of Lumber, Logs, Planks, Scantling, cubical contents of square and round timber; hints to lumber dealers; wood measure; speed of circular saws; care of saws; cord-wood tables; felling trees; growth of trees; land measure; wages, rent, board, interest, stave and heading bolts, etc. Standard book throughout the United States and Canada. Get the new illustrated edition of 1882. Ask your book-seller for it. Sent post-paid for 35 cents.

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Having for its special objects the furnishing to subscribers of reliable information on the financial standing or otherwise of tradesmen and others, the collection of outstanding accounts, and the procuring of the most reliable information from independent sources of the value and condition of landed and other properties in any part of Canada and the United States, with correspondents in Great Britain and other parts of Europe.

Our method of procuring for our subscribers the most reliable information is through solicitors of the highest standing, and from other equally reliable sources in the several localities indicated, who are under contract with us to supply the necessary information promptly.

The Landed Enquiry Department of this Agency, the only institution of this kind known, is invaluable to Solicitors, Loan, Investment, and Insurance Companies, Estate Agents, and others, preventing fraudulent land transactions resulting from misrepresentations.

Another important feature in connection with this department is, that subscribers depositing accounts for collection will, if requested, be furnished with a Form of Script, on which will be entered the name of each debtor, the amount owing, and a full report of the prospects of collection, and providing that the receipts thereof be paid to bearer only, thus enabling subscribers to realize on their outstanding accounts.

The Agency will forward at least once in three months, or oftener if desired, a report and statement of all accounts in hand.

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| do June 8th, | | do October 5th, |
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Notice to Contractors.

TENDERS will be invited for the construction of
the Section of the Cape Breton Railway extending
from the Grand Narrows to Solney, a distance of about
45 miles. This preliminary notice is given in order
that Contractors desiring to tender for the work may
have an opportunity to examine the location before the
winter sets in.

By order,

A. P. BRADLEY,

Dep. of Railways and Canals,
Ottawa, 20th Nov., 1886.

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MANUFACTURERS OF SAWS

Circular, Shingle, Gang, Cross Cut,
Concave, Mulay, Drag, Grooving.



EVERY SAW FULLY WARRANTED.
Prices on Application.

THURBERS ROYAL

Anti-Friction Babbit Metal

IMPORTERS AND DEALERS IN

Band Saws, Emery Wheels, Files,
Saw Swages, Rubber Belting, Saw Sets,
Saw Gummers, Leather Belting, Iron Pipe, &c.

