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NO. 1.

LAW AND LOG DRIVING.

A case involving the legal rights of log drivers in streams was lately adjudicated at Saginaw, Mich., and excited considerable interest among lumbermen. Jeron P. Kroll sued Thomas Nester for \$5,000, on the charge that Mr. Nester ran his logs among the plaintiff's in the Tittabawassee river, making it necessary to remove them at a cost of the amount sought to be recovered by suit. The history of the case in brief is this: Kroll took a contract to drive about 80,000,000 feet of logs on tributaries of the Tittabawassee, above the mouth of the Sugar river, Nester also having about 60,000,000 feet in the Sugar. It was alleged by Kroll that Nester would run his logs down to the mouth of the stream, and whenever space was made in Kroll's drive, Nester would run his logs between so that Kroll was compelled to move Nester's logs in order to drive his own. Kroll claimed that it was worth \$5,000 to do this work, and to dam the tributaries in order to obtain a head of water to let the logs down. The judge in his charge to the jury said:

"The plaintiff claims that in the year of 1881 he entered into certain contracts with various log-owners who had logs upon the tributary streams above the Gerrish dam, known as the East Branch and the Middle Branch, and upon the main stream above the Gerrish dam, and below the mouth of the Sugar river; that by the terms of these contracts he was authorized by the owners of the logs to run and drive all their logs from the points where they were banked to within the limits of the Tittabawassee Boom Company—in other words, to drive them below the Gerrish dam. He claims that while engaged in this work the defendant had a large quantity of logs in the Sugar river, a branch of the Tittabawassee, coming into it about 15 miles above the Gerrish dam. The plaintiff claims that he ran those logs belonging to the defendant, from the mouth of the Sugar river down the Tittabawassee into the boom limits at the Gerrish dam; that after they passed from the Sugar river into the Tittabawassee they created an obstruction to its floating capacity and navigation, and that in order to remove the obstruction so as to get his own logs down he was compelled to expend a large amount of labor, and he asks compensation for the same in this suit. I think you can find from the testimony in this suit that the Tittabawassee river, up as far as the mouth of the Sugar, at least, was a public highway and a navigable stream."

The judge then proceeded, at some length, to recall the attention of the jury to the fact that although the plaintiff commenced the driving of the logs about April 19, the Gerrish dam was not put in until about May 15, and that all the logs that passed into the boom limits between those dates were brought down by the assistance of the natural flow of water, while the logs that were put through after May 15 were

driven by the aid of the Gerrish dam and other dams above it, and that they could not have been driven with the unaided natural flow of water. The jury were instructed that, under the statute, they might render a verdict in favor of the plaintiff for whatever logs were run down by the aid of the natural flow of water, if they found that any of the defendant's logs were so run by the plaintiff.

The court also charged the jury that the plaintiff could not recover for any work performed by him on Mr. Nester's logs after the Gerrish dam was put in; for all the work claimed to have been done after that was by means of artificial floods created by dams put in for the purpose; and the statute does not apply to work of that character. It was designed to provide a mode for recovering the cost of work done in removing obstructions from streams that are public highways. Before parties can recover for work done in running logs upon a stream navigated in an artificial way they must either make a contract with the owners of the logs, or they must form a company for the improvement of the stream, and obtain from the legislature a right to take tolls. Private persons have no right to dam or boom a navigable stream of water without authority from the state. It appears that the plaintiff has not proceeded under the law, but has merely acted as the agent of various log owners, who could not confer any power on Mr. Kroll to take a stream in its navigable state and increase its navigability by the use of dams and floods, and then charge others for the use of such improvement. The court therefore finally charged the jury that in making up their verdict they should omit any consideration of the work claimed to have been done by the plaintiff after the Gerrish dam was put in, where the Tittabawassee company receives logs put in above, as whatever work may have been done after that time was accomplished by the aid of artificial dams and floods, without corporate authority, or special permit from the state. The jury returned a verdict of \$800 for Mr. Kroll.—*Northwestern Lumberman.*

THE TORONTO TRADE.

According to the statements obtained from the principal lumber dealers of the city, the lumber trade this year has been very satisfactory in volume, and has been equal to that of last year if not ahead of it. The demand has been well up to the supply, so that the prices of last year have been maintained, and for some grades have shown an advance of 20 per cent. The bulk of the lumber handled by the Toronto dealers has of course been shipped to the United States via Oswego and Charlotte. The Americans are in fact appreciating Canadian lumber so much that an agitation has been started for a repeal of the duty. The Secretary of the Chicago Lumbermen's Exchange has

been for some time past in this country collecting facts and statistics that would strengthen the arguments for the free admission of Canadian lumber into the United States. The American lumber is getting scarce, and lumbermen on the other side contend that no harm would be done to American interests by Canadian competition. While the export trade from the United States has increased during the year the local trade has hardly been so good, but the country trade it is said has been satisfactory. It is estimated that taking all the Toronto firms, the total amount handled for all purposes during the year reached 140,000,000 feet. Of this quantity one firm handled not less than 60,000,000 of feet, while another important firm handled 20,000,000 feet.

Owing to the want of snow the output was not so great last season as was anticipated. Reports from the lumbering districts state that there is now too much snow, the depths in many parts being four feet, which puts serious difficulties in the way of handling.

With regard to next year's business the feeling is not to stock over what the mills had last year. It is believed that it would not be wise to increase the product, as prices are as high as they can be expected to go, and there is a fear in the trade of over-production. The cost of stocking last season was very high. Provisions were dear and lumbermen were scarce. It is too early in the winter to predict what amount will be hauled this season, but if there is favorable weather there will, no doubt, be a good supply.—*Toronto Mail*, Tuesday 12th Dec.

TO TRANSPLANT TREES IN WINTER.

E. W. Cornell, Clinton Corners, N. Y., gives to the *Dutchess Farmer* suggestions about transplanting trees in winter, a useful method when time is a matter of importance, or when the immediate securing of large specimens for the lawn is especially desired: "When properly done the holes should, of course, be dug when the ground is not frozen, and the soil placed in a compact heap and covered on the south side of the hillock with some coarse litter from the horse stable to keep a portion of the soil from freezing, which will give the planter access at any time during the winter. Sufficient loose soil to pack about the ball of earth will be taken up with the tree, which will be nearly sufficient of itself to fill the receptacle, and the dressing will be just where wanted to spread about the tree for winter protection and for immediate nourishment in the spring. Experience has taught me that it is highly needful to furnish some fertilizer for all transplanting trees at the time of removal. In balling out trees it is not advisable to wait until the ground is frozen hard, as is often done, which greatly increases the labor and expense,

"It is only necessary to dig a narrow trench about the tree, which may be quite near the

trunk; the soil being damp will be held by the many fibrous roots from falling into the trench, which should be deep enough for cutting down through the horizontal roots, which, with most trees, will require a depth of from 15 to 20 inches, laying bare the top roots. Having dug about all the trees in like manner, all you have to do is to wait until the ball of earth is frozen, when you have only to chop off the the main perpendicular root, and with the trunk for a lever, two can readily load upon a stoneboat or sleigh a tree, with ball of earth attached, as heavy as a team can haul. When arrived at the place of setting drive the boat or sleigh upon the heap of soil in such a manner that it will incline toward the pit, and in a moment you may slide the tree to its appointed place."

"Tramp some of the soil from under the dressing around the ball of earth; put the litter about it, and the work is done much better than it could be at any other season of the year, for the multitude of fibrous roots in the ball of earth preserve the roots from any check until the larger roots can throw out a colony from the points where they were cut off. There is no necessity for losing one tree in 100 by this method, while a large tree can be removed with as much safety as a small one, providing the ball of earth attached be correspondingly enlarged. This method is exceedingly favorable for the resetting of evergreen trees, which otherwise is attended with much danger of loss from the least drying of the roots. It is a work well adapted to the winter, as it can readily be discontinued at an inclement season, to be resumed at any favorable moment."

A QUEBEC despatch says:—Only fifteen car-loads of Messrs. Grant & Co.'s square timber are coming down by the North Shore Railway this winter. The balance will remain over until the spring. The timber has now to be piled on the wharf, as it cannot be sent by water to the coves, owing to ice on the river.

IN reference to the McLaren-Caldwell case the *Lumberman's Gazette*, of Bay City, Michigan says:—At this distance the premises of the *Mail* appear to be well taken, and proof against its assailants. Mr. McLaren is quite well-known here, and his victory, founded as it apparently is upon justice, will gratify Saginaw lumbermen.

THE *Belloville Intelligencer* says:—Lumbermen may be interested in knowing the precise quantities of the different woods wintering over here. There are as follows:—White pine (square), 6,532 feet; white pine (wancy), 3,354,943 feet; red pine, 2,363,624 feet; oak, 1,362,153 elm, 530,611 feet; ash, 212,422 feet; birch, 78,413 feet; pipe staves, 293; puncheon staves, 1,007; pine deals, 2,507,704; spruce deals, 1,012,920.

OVERPRODUCTION THE CAUSE OF DEPRESSION.

That zealous greenbacker, Mr. Sam Cary, has often stoutly asserted in his speeches that there is no such thing as overproduction—an expression so fallacious that the simplest mind can realize it. When any commodity accumulates much in excess of the demand for it, an overproduction has taken place, and a weakness in its value will result in proportion to the size of the surplus. This is a commercial law as ancient as trade, and needs no argument to prove it.

It follows naturally, then, that overproduction, more than anything else, is the cause of every business and financial depression. Speculation is often given as a reason why panics occur, but really, speculation is only an incident in the general movement of trade, and as often grows out of a panic as apparently produces one. Speculation is simply a venture on the change in values, on the future, or on the differences of prices in separate localities. It can hasten a financial revulsion—can be the incident that precipitates it—but of itself alone it can never be the cause of a break-down in general business. The flurries in the New York stock market since the summer of 1881, at each occurrence giving rise to forebodings of a business revulsion, but always failing to bring it, are examples of great disturbance in finances without a corresponding effect on general commercial relations. The reason of this is that while the stock speculators were forcing securities up and down, and creating a panic among themselves, the people at large were engaged in producing what they found a ready market for at good prices, and were, therefore, prosperous. As long as there was not such an accumulation of farm products and manufactured goods as to glut the various markets and prevent a copious interchange, the bulls and bears of the stock exchange might bellow and roar themselves hoarse, the bankers utter wise predictions of near depression—nobody heeded so long as he could sell all he could produce, and get good prices for it.

In this heedlessness of the future lies the danger of overproduction, which is really the cause of every decline in values. When there is an active demand for commodities, and it is long continued, producers become infatuated with the notion that there is no limit to it, and that production can be augmented without any regard to the prospective demand. Business and manufacturing branch out, one plant inducing the establishment of another. Capital is aroused, and once broken loose from its conservatism, seeks investment in new enterprises, or the expansion of the old in a crazy kind of way that would be impossible in hard times. Take the rush in railroad building for the last two years as an instance. Previous to that time populous and thrifty districts of the country lay without facilities of transportation, and delegations of citizens could neither beg nor buy the railroad companies into building extensions or branch lines. Now what do we see? Now railroads have within the past three years penetrated to points before obscure, where there was the least show for present or prospective business, especially if there were any danger that a rival company would build a road and obtain the traffic. A big saw-mill, or any other manufactory, has been inducement enough to cause a company to put in a branch connecting it with the main line. There has been a kind of mania for railroad building that at one time seemed without reason, and has actually caused an overdoing of the thing, which railroad managers now acknowledge; though in this particular instance overproduction has benefitted everybody but those bondholders whose securities have sunk in value on their hands.

The overbuilding of railroads has stimulated the steel rail makers, and iron-workers to the top of their speed in turning out product to meet the demand. There was no means of knowing how much would be required, and though rail makers operate only on orders, the tendency to overproduction has been felt in the planting of new mills and enlarging the capacity of old ones, so that machinery is now liable to stand idle. The overproduction can be seen in too much capacity to produce.

In the lumber business the demand for pro-

duct has been such during the last two years that every means has been employed to increase it. Pine lands have been bought up at advancing values, hundreds of mills have been erected, logging railroads constructed, streams improved, and new fields of operation have been invaded by the lumbermen's enterprise. The result has been that the output of this year has been considerably larger than it was in 1881, while the capacity of production has been increased to a great extent, giving promise that there will be a considerable increase in manufacture during the season of 1883, earnest of which is given by the determination of operators to put in a larger stock of logs that they did last year.

Every variety of manufacture and business might be reviewed, showing that the majority of them have, during the past years of prosperity, been crowded a little beyond what the demand required; that is, the demand in the earlier period of prosperity gave industry such a momentum that now that a halt is necessary no brakes are at hand. Now the danger is that, before the motion can be arrested, industry will be wrecked on an accumulation of products.

Coming back to the lumber business, it is plain to be seen that the depression of values with which the manufacturing has closed is consequent on overproduction. It is true that if there had not been some falling off in railroad building, and if the farm product of 1881 had been a little larger, there would have been no slackening in the demand for lumber, so that the output this year would have been as quick in the market as it was in 1881 and the winter of 1882. Yet it is a fact that the enormous surplus on hand now represents a certain amount of overproduction, or else prices would not now be weak. Any lumber dealer would regard the attempt of the lumberman's meeting of this city to bull prices this winter repeatedly, as it did last winter, as a mockery of the good sense of lumbermen at large. That is to say, on account of the fact that lumber has been produced considerably in excess of the demand, it is not worth as much as it was six months ago. Nothing is plainer than this, yet the loggers and mill men are going ahead this winter to still further increase the surplus, with the opinion apparently strong in their minds, that there is to be no halt in the increase of consumption. If the value of lumber next season drops to something like the low figures of 1873 and the years following, the manufacturers will have done it themselves. The *Lumberman* is not undertaking to say that there may not be contingencies that shall give an upward turn to affairs. But from present appearances it is safe to judge that the country will not need more lumber next year that it did this, and it would not be surprising if it should consume less. At any rate, considering the large surplus now on hand, it would appear to be sufficient for all emergencies, even if the cut next year should show no increase.—*Northwestern Lumberman*.

COLLECTIONS OF WOODS.

The *Chicago Lumber Trades Journal* publishes the following extracts from a letter from Professor C. S. Sargent to Morris K. Jesup, Esq., dated Nov. 11, 1880. Though they have special reference to the United States these suggestions are worth consideration in Canada:—

The following suggestions are made in regard to the collections of the woods of the United States:

1. That every arborescent species found growing naturally within the limits of the United States should be represented in the collection.

This would include the semi-tropical West Indian species which reach southern Florida, and the few Mexican species extending north of the boundary into our territory. It is essential that these should be included in order that the collection may fully represent our arborescent flora; and because many of these southern species produce material of great value, becoming large and common trees toward their centres of distribution south of our boundary. They must become, sooner or later, objects of very considerable economic interest of the American people. A few exotic species of first rate economic value, already either fully naturalized or rapidly becoming so, should also be included. Such trees are the Eucalyptus, the Orange, the

Ailanthus, the Pride of China, the Tallow tree, and perhaps one or two others.

2. That the species be arranged scientifically; that is, in their botanical sequence, in the order and with the numbers adopted in my forthcoming Census Report on the American Forests.

3. That each species, while in connection with its nearest botanical allies, should be so arranged with its products that it would form in itself a complete exhibit. Each species would thus be represented by a portion of the trunk showing bark, nature of the wood, rate of growth, and proportion of sap to heart wood; and by copious mounted specimens of the foliage, flowers and fruit. Around this species exhibit should be grouped the products of the species, such as specimens of planks, polished and unpolished; pieces of the wood of monstrous or distorted grain adapted to cabinet making; specimens illustrative of the durability of the wood of the species; specimens of tanning material, dyes, wood pulp, turpentine, gums, and other minor products of the species.

4. That a conspicuous label be attached to each of the species groups, giving the Latin and English names of the species, with the principal synonyms by which it is known, its geographical range, size, etc.

On the label should also be given the results of our census tests of American woods.

These suggestions being carried out, the visitor would see at a glance the scientific character and position of every tree in the United States in relation to its botanical connections, the economic value and nature of its products, and its geographical distribution.

Such a collection, thus arranged, would afford material for the information and instruction of every class of people in any way interested in our trees and their products and uses. No collection of forest products has yet been formed on a sufficiently comprehensive scale to enable the student to readily examine the sylva of a country in all its scientific and economic aspects.

It is recommended that photographs of American forest trees and American forest scenery should be added, and that this collection should be made as large as possible, as being a very important feature in relation to landscape gardening and horticulture.

The public spiritedness of Morris K. Jesup, Esq., of New York, induced him to provide the funds to carry out the above suggestion of Prof. C. S. Sargent, of Harvard College, and the place selected for the exhibits is in Central Park, N. Y., where already those visiting the place may witness a large fulfillment of the object. The extracts were furnished the *Journal* by Prof. Sargent.

U. S. LUMBER DUTIES.

The *Chicago Lumber Trade Journal* says:—The time is fast approaching when the attention bestowed upon the lumber tariff question by the United States Tariff Commission must assume the form of a report in the line of recommending a cessation or continuance of the existing revenue on this indispensable commodity. Wherever we have penetrated a glance into regions where the lumber trade is carried on, we have been imperatively impressed with the degree of importance attached to the subject by extensive dealers, so far as relates to the desire for a removal of duty. Men who know as accurately as may be known from long experience and acquaintance with the subject the signs of the times, and therefore do not halt or falter in expressing their opinions. It may be imagined by some of both factions at this point that outside of Chicago, where the tariff discussion was born, or, at least, received the first large and important discussion, and where it drew to both sides able and farseeing men, there has been little if any interest evoked. This, they will find, is a great mistake, as we have the assurance of men who figure quite conspicuously in the industry at several leading markets that they are anxious to welcome free Canadian lumber, and are ready to join encouragement and whatever aid they may to the leaders of revolt against monopoly.

These men, too, know something of the true philosophy of advancing the rapid and beneficent growth of our agricultural possibilities, and while desirous that the manufacturer should

maintain in his sales a satisfactory and ample margin of profit, they are on the other hand, not willing to witness the desirable promotion of our West retarded by exorbitant prices, nor prepared to encourage a laxity and dullness of their business through the unreasonableness of American timber owners and manufacturers. The resources of the manufacturer are too certain in their promises to add fabulous sums to their already overflowing coffers of riches, to cause them to betray the least anxiety, and what the country demands is not that they should not receive a fair and reasonable price for the product, but relax the despotic power, placed in their hand by the present revenue, to dictate future prices, or be forced to do so by the admission of foreign lumber free of duty.

The flow of emigration to the Western States and Territories, which, to the extent already settled, has been largely due to procuring necessities at prices within a reasonable demand on sellers' pocketbooks, must be encouraged by the further possibilities of securing in the future material cheaply and plentifully for the construction of homes and all building necessities, otherwise the fact of being unable to secure this material at rates conforming with the means of colonialists, will retard more than is generally supposed the influx of the foreign emigration, indispensable in advancing settlement in the apparently boundless and unoccupied territory of the West.

The good that may early result to the prospective development of opportunities for our welfare as a nation in no small measure lies within the power of suitable legislation concerning the lumber supply and proper protection to consumers, and should emanate from the wisdom of next Congress.

GROWTH OF BARGE TRANSPORTATION.

Previous to the year of 1862 great difficulty had been experienced by shippers of lumber in obtaining towage for that commodity from the West to Buffalo, and on account of the rapidly increased demand and supply the freight on lumber had attained to the almost prohibitory price of \$7 to \$10 per M. feet from the Saginaw Valley to Buffalo. J. S. Noyes, of this city, then, as now, a large dealer in lumber, thought to overcome the difficulty and to place this product of the great west upon the Eastern markets at reduced rates of freight, and so far succeeded that in less than a year after his first experiment the price was reduced from \$9 to 9 shillings.

The first attempt was made by himself, Mr. John T. Leaton, of the old firm of Farmer, DeBlauw & Deeds, Joseph Van Vleet and one or two others in the summers of 1860 and 1861, by making up immense rafts on the Saginaw River, the details of which are still familiar to many of the people of Ray City, and towing them through the lakes. Bugbee and Selim Sears were also interested in rafting lumber, and H. A. Frink tried rafting staves, though unsuccessfully. The rafting of lumber proved but a partial success, for notwithstanding only one raft was lost the timber became so much damaged by bruising and dirt that this was found impracticable. It was evident that something else had to be done, and in the spring of 1862 it occurred to Mr. Noyes that the hulls of the old steamers, which were at one time the pride and glory of our lakes, several of which were dismantled and stripped of their cumbersome cabins were lying at anchor and sunk at the foot of Bello Isle, Detroit, could be utilized in this direction. He at once purchased two of them, the *Sultana* and *Empire*, at an expense of about \$25,000, soon had them in commission; hired a tug at \$100 per day, and running both barges with one crew, consisting of a captain, four men, and a cook, transferring these from an empty barge to a loaded one at the mouth of the Saginaw River, safely carried 1,000,000 feet of lumber on each barge at each trip. The *Sultana* arrived in Buffalo on her first trip in June, 1862.

Thus was devised a cheap style of transportation which has been growing ever since, and has, in fact, become nearly the only way of carrying lumber to the Buffalo market. Its effect was to bring down on the head of young Noyes the opposition and anathemas of the rich vessel owners of the lakes. In one man only he tells

us—the lamented Capt. E. P. Door—had a friend to his scheme, who gave him encouragement and counsel. In 1863 he purchased the tug Reindeer, and thus commenced a system of transportation which has grown to mammoth proportions, not only in lumber, but grain and other products, and not only upon our lakes, but it has extended to the shores and bays of both oceans.

In the place of one spar and one tail to keep them before the wind, they are now built with two and even three masts, enabling them better to care for themselves in case of compelled desertion by the propeller. In 1870 there were 128 barges on our lakes of a capacity of over 40,000 tons custom house measurement, and representing a capital of over \$1,000,000. So that the old Sultana and Empiro, whose arrivals and departures to and from Buffalo thirty-five years ago created an excitement unparalleled in the history of passenger traffic, were destined to become in their old age the pioneers of a system of transportation that to-day feeds one half of the men who go on the lakes for a livelihood.—*Day City Call.*

FARMING FORESTERS.

The Chicago *Northwestern Lumberman* says: At the national agricultural convention which has been in session at the Grand Pacific Hotel, this city, for several days, recently, the subject of forestry was brought under discussion. Ex-governor Furness, of Nebraska, read a paper entitled "Tree Planting and Growing on the Plains." He characterized it as not a treatise on forestry, but an account of what had been done to convert naturally treeless plains into groves of valuable timber. He asserted that, through the stimulus of rigid legislation, Nebraska had taken on an acquired dignity as a timber-producing state. No longer ago than 1854 tree planting was begun there, spontaneous growths of timber being noticed along the water courses. Seedlings were found to thrive well on upland prairies, and gradually trees were added other than the native ones. Since the policy of tree planting was introduced, the speaker said over 244,350 acres of land in the state had been planted with forests. During the past 28 years, he estimated, over 605,514,000 trees have been set out, the spontaneous growth influenced by this planting equaling half as many more. The best and most profitable trees for growing in that state experience has shown to be as follows: Six varieties of ash, seven of oak, walnut, hickory, elm, locust, linden, sycamore, maple, willow, cedar, several varieties of pine, and many others more have been to some extent handled with success. Though nature was, after all, the best nurseryman, yet man himself could do much to second the efforts of nature. The order of planting was given as follows: Cottonwoods, box-elder, soft maple, elm, ash, black walnut, locust, catalpa, oak, etc. The convention proposed to show its spirit on the forestry question, and adopted the following resolutions:—

Whereas, We begin to realize the lamentable wasting of the forest lands of the United States, and the sad effects of destruction upon the climate and water supply of the country, and we are forced to confess our need of the knowledge of the better management of the woodlands than is now possessed by the people; therefore

Resolved, That we urge upon the state legislatures the propriety of selecting judicious persons to act as state forestry commissions, whose duty it shall be to instruct the people in regard to forest trees and their production and management; said officers to report annually upon the condition of the woodlands in their respective commonwealths.

Resolved, That we beg of all the agricultural colleges established under the land grant of congress that they shall lose no time in planting state arboreta and establishing forest experimental stations where all species adapted to the soil and climate shall be tested, and whence surplus seeds and plants may be distributed. Annual reports of these establishments to be made to the governors of the state boards of agriculture.

Resolved, That congress be asked to establish one or more experimental forest stations upon the public domain, where the propagation and testing of useful trees shall be the leading ob-

ject, with the collection of seeds and plants to be distributed by or under direction of the United States agricultural department, to which bureau these stations shall make annual reports.

THE TRADE OF QUEBEC.

The *Chronicle* of Dec. 21st gives the following statement of the comparative receipts of lumber measured and culled to date;—Also, the average of the past five years:—

WHITE PINE.	
1881.....	6,029,041
1882.....	7,961,014
1,931,973 feet more this year.	
Average of past five years.....	5,733,572 feet.
WANEY.	
1881.....	3,005,274
1882.....	3,105,329
40,055 feet more this year.	
Average of past five years.....	2,365,603 feet.
RED PINE.	
1881.....	1,045,720
1882.....	1,456,910
483,810 feet less this year.	
Average of past five years.....	1,312,010 feet.

OAK.	
1881.....	2,994,477
1882.....	1,312,100
1,681,368 feet less this year.	
Average of past five years.....	1,630,202 feet.

ELM.	
1881.....	1,027,070
1882.....	714,549
313,121 feet less this year.	
Average of past five years.....	638,760 feet.

ASH.	
1881.....	408,798
1882.....	310,760
98,029 feet less this year.	
Average of past five years.....	210,936 feet.

BIRCH AND MAPLE.	
1881.....	151,774
1882.....	269,661
117,887 feet more this year.	
Average of past five years.....	285,740 feet.

PIPE STAVES.	
1881.....	418 M.
1882.....	504 "
146 M. more this year.	
Average past five years.....	331 M.

WEST INDIA STAVES.	
1881.....	671 M.
1882.....	1,429 "
758 M. more this year.	
Average of past five years.....	664 M.

SAGINAW MILLS.

The following item, being a comparison of the work done by some of the saw mills in the Saginaw Valley in 1857 with that of the season just closed, will prove interesting to many of our readers: The largest cut of any one mill in 1857, at East Saginaw, was 4,500,000 feet, that of Cushing & Co. Here are a few of the others: J. Hill, 2,500,000 feet; L. B. Curtis, 3,000,000 feet; D. G. Holland, 1,500,000 feet; Whiting & Garrison, 3,000,000; Copeland & Co., 1,500,000; Atwater mill, 3,500,000; Gallagher mill, 2,000,000; G. D. Williams & Son, 2,500,000; Curtis & King, 3,500,000. At Carrollton the mill of J. A. Westervelt cut in that year 4,000,000; the Johnson mill and Fisher mill at Zilwaukee, 4,000,000 and 1,500,000 respectively. At Fortsmith, the McCormick mill cut 1,500,000; and James Fraser mill 3,000,000; and three others from 1,200,000 to 2,000,000 each. There were 14 mills at Bay City and Kawkawlin cutting from 1,500,000 to 4,000,000 each. The mill statistics for 1857 were furnished by the Hon. John S. Estabrook, of East Saginaw, still in the prime of life and engaged in the lumbering business. Of the seventy odd saw mills now on the Saginaw river, the smallest cut of any is about 7,000,000 feet and the average will probably reach 16,000,000. The mill of Barker & Birdsall, (formerly McGraw) cut this year a fraction over 40,000,000 feet; that of H. W. Sago about 32,000,000 feet; and the Whitney & Batchelor mill 31,500,000 feet. Last year, running some nights, the McGraw mill cut 55,260,724 feet. In 1857 there were 10,000,000 shingles manufactured on the river and the past

year the quantity will considerably exceed 300,000,000. Thus do we progress.—*Lumberman's Gazette.*

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of trade, for the month of Nov., and for the first 11 months of the year:—

Month ended 30th Nov., 1882.	Quantity Loads	Value.
Timber (Hewn).....	27,470	58,422
Russia.....	34,290	50,400
Sweden and Norway.....	20,034	62,498
Germany.....	3,607	20,472
United States.....	1,630	22,130
British India.....	47,071	239,503
Other Countries.....	15,777	21,349
Total.....	160,787	471,200

Month ended 30th Nov., 1882.	Quantity Loads	Value.
Timber (Sawn or Split, Planed or Dressed).....	60,385	160,448
Russia.....	120,023	313,365
Sweden and Norway.....	131,708	377,034
British North America.....	11,000	37,060
Other Countries.....	330,020	893,905
Total.....	633,116	1,605,812

Staves, (all sizes).....	9,440	54,022
Mahogany (tons).....	2,158	20,008
Total of Hewn and Sawn.....	450,813	1,365,111

11 MONTHS ENDED 30TH NOV., 1882.		
Timber (Hewn).....	201,023	612,021
Russia.....	584,778	929,340
Sweden and Norway.....	281,005	797,451
Germany.....	160,170	522,469
United States.....	37,419	477,129
British India.....	248,105	1,202,400
Other Countries.....	303,650	388,064
Total.....	1,897,076	4,329,873

11 MONTHS ENDED 30TH NOV., 1882.		
Timber (Sawn or Split, Planed or Dressed).....	1,151,571	2,908,104
Russia.....	1,596,426	4,008,588
Sweden and Norway.....	920,035	2,458,450
British North America.....	316,504	1,011,754
Other Countries.....	3,934,536	10,380,095
Total.....	113,704	608,107

Staves (all sizes).....	113,704	608,107
Mahogany (tons).....	33,227	323,440
Total of Hewn and Sawn.....	5,881,611	15,310,863

How to Recognize Good Wood.

Rankine says that there are certain appearances characteristic of good wood, to what class soever it belongs. In the same species of wood that specimen will in general be the strongest and most durable which has grown the slowest, as shown by the narrowness of the annular rings. The cellular tissue, as seen in the medullary rays (when visible), should be hard and compact. The vascular or fibrous tissue should adhere firmly together, and should show no wooliness at a freshly cut surface; nor should it clog the teeth of the saw with loose fibers. If the wood is colored, darkness of color is in general a sign of strength and durability. The freshly cut surface of the wood should be firm and shining, and should have somewhat of a translucent appearance. In wood of a given species the heavy specimens are in general the stronger and the more lasting. Among resinous woods, those having the least resin in their pores, and among non-resinous woods, those which have least sap or gum in them, are in

general the strongest and most lasting. Timber should be free from such blemishes as "clefts," or cracks radiating from the centre, "cup shakes," or cracks which partially separate one layer from another; "spots," where the fibers have been crippled by compression; "wind galls," or wounds in a layer of wood which have been covered and concealed by the growth of the subsequent layers over them; and hollow or spongy places in the centre or elsewhere, indicating the commencement of decay.

AN ANGRY TREE.

A gentleman of this place has a tree which is a species of acacia. It was grown from a seed brought from Australia. The tree is now a sapling some eight feet in height, and it is in full foliage and growing rapidly. It is leguminous, and very distinctly shows the characteristics of the mimosa, or sensitive plant. Regularly every evening, about the time the "chickens go to the roost," the tree goes to roost. The leaves fold together, and the ends of the tender twigs coil themselves up like the tail of a well-conditioned pig.

After one of the twigs has been stroked or handled, the leaves move uneasily and are in a sort of mild commotion for a minute or more. All this was known about the tree, but it was only yesterday that it was discovered that the tree had in it much more life and feeling than it had ever before been credited with. The tree being in quite a small pot, one which it was fast outgrowing, it was thought best to give it one of much larger size. Yesterday afternoon the tree was transferred to its new quarters. It resented the operation of its removal to the best of its ability.

Arriving at his residence about the time the tree had been transplanted, the gentleman found the house in grand commotion. On asking what was up he was told that they had transplanted the tree according to orders and the operation had "made it very mad."

Hardly had it been placed in its new quarters before the leaves began to stand up in all directions like the hair on the tail of an angry cat and soon the whole plant was in a quiver. This could have been endured, but at the same time it gave out an odour most pungent and sickening—just such a smell as is given off by rattlesnakes and many other kinds of snakes in summer when tested. This odour so filled the house and was so sickening that it was found necessary to open the doors and windows. It was fully an hour before the plant calmed down and folded its leaves in peace. It would probably not have given up the fight even then had it not been that its time for going to roost had arrived.

The Chicago *Northwestern Lumberman* says: The figures of the secretary of the Lumberman's Exchange estimate the total amount of hardwood now in stock in 21 yards of the city, at 37,500,000 feet, which is something of an increase over the summer stocks as indicated by the figures furnished from the same source. It is apparent that stocks are not observably diminishing, and that all season they have been replaced about in the ratio of current sales.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Nov. 30th, 1881 and 1882, and also the Consumption for the month of Nov., 1881 and 1882:—

	Stock, Nov. 30th, 1881.	Stock, Nov. 30th, 1882.	Consumption for the month of Nov. 1881.	Consumption for the month of Nov. 1882.
Quebec Square Pine.....	472,000 ft	351,000 ft	234,000 ft.	180,000 ft.
Waney Board.....	389,000 "	271,000 "	271,000 "	271,000 "
St. John Pine.....	5,000 "	5,000 "	Nil "	Nil "
Other Ports Pine.....	45,000 "	66,000 "	7,000 "	12,000 "
Red Pine.....	45,000 "	68,000 "	20,000 "	3,000 "
Pitch Pine, hewn.....	553,000 "	701,000 "	131,000 "	95,000 "
Sawn.....	458,000 "	626,000 "	62,000 "	66,000 "
Planks.....	73,000 "	90,000 "	7,000 "	2,000 "
Dantzic, &c., Fir.....	33,000 "	38,000 "	23,000 "	0,000 "
Sweden and Norway Fir.....	13,000 "	21,000 "	12,000 "	0,000 "
Oak, Canadian.....	460,000 "	343,000 "	70,000 "	63,000 "
" Baltic.....	130,000 "	137,000 "	29,000 "	52,000 "
Elm.....	68,000 "	43,000 "	0,000 "	2,000 "
Ash.....	65,000 "	48,000 "	11,000 "	32,000 "
Birch.....	10,000 "	16,000 "	10,000 "	10,000 "
East India Teak.....	100,000 "	60,000 "	19,000 "	40,000 "
Greenheart.....	20,000 "	20,000 "	5,000 "	14,000 "
N. B. & N. S. Spruce Deals.....	30,000 "	188,000 stds.	4,000 "	3,000 "
Pine.....	18,034 stds.	16,808 stds.	8,508 stds.	8,470 stds.
Quebec Pine & Spruce Deals.....	745 "	810 "	517 "	352 "
Baltic Deals.....	10,283 "	8,058 "	2,048 "	2,078 "
Boards.....	6,349 "	5,177 "	517 "	352 "
Boards Flooring.....	246 "	668 "	14 "	157 "
	1,060 "	2,718 "	672 "	810 "

ENGLISH PRICES.

The London *Timber Trades Journal* has the following article on "Present and Future Prices:"

"The letter of our Stockholm correspondent last week and the advices received from our other sources of information in Northern Europe admonish us that the season of shipping timber and deals for this country is virtually at an end for the year 1882. Upon weather may prevail here and there, or an occasional thaw may for a brief while re-open a port previously accounted shut up; but only ships already loaded in the port or others near at hand, could avail themselves of such a chance, and even these latter would hardly expect to get out again before the ice set in, their advantage consisting in making a good loading port, to be in readiness for first open water in the spring, and possibly, if chartered, loading and lying under cargo till that time came around. To all intents and purposes, therefore, the import trade may be considered closed at its sources for this year, though at this end of the traffic a good deal may still be doing in the way of landing and delivering the latest shipments as they arrive. Nor is it easy to fix a period when it can be said that the last of this season's cargoes has come forward. Some ships that have got damaged on their homeward voyage will have put in somewhere for repairs, and on being again ready for sea will take the first opportunity to get away again if a favorable chance presents itself, and in Southern Sweden and Norway there are good roadsteads that are seldom obstructed by ice, such as Fredrikshald and Laurvig, where vessels can usually get away at any part of the winter, only that the short days and the insurance regulations of that country discourage native vessels from doing so during the dead of winter. But their first open water is counted to take place about the 20th of February by the insurance companies, when the more northern ports of the Gulf of Bothnia, and even the Baltic, are looking forward to be icebound for at least two months longer.

Looking westward we find the port of St. John, New Brunswick, equally favored in that respect over the other principal shipping ports of that province, Nova Scotia and the St. Lawrence. The great rise and fall of tides in the Bay of Fundy prevent any accumulation of ice, so as to close the port in winter, but there is generally for the reasons aforesaid, little doing in the way of timber export during the inclemency of that season, and we learn that, although freights for the United Kingdom are still quoted there, no new business is doing in that way just now, as it is not considered prudent to take up vessels at the rates now demanded.

From Quebec we learn that the ice is setting in, and no more vessels are likely to come down the St. Lawrence, nor are the lower ports likely to load any more vessels this year. In Europe, we learnt a week ago that the Finnish ports were closing, the river at Abo was blocked with ice, Uleaborg and Wyborg were both shut up, and the navigation considered closed on the eastern shores of the Baltic, nearly as far down as Stettin, which being rather earlier than usual seems to indicate the approach of a long and hard winter in those regions whatever may be in store for us at home. Thus it is made manifest that the shipping department of the import trade can do little or nothing more this year. It may also be said that every importer knows pretty well the sum total—or the maximum—that his supply can now amount to—that is if he has anything afloat—and his minimum will be determined by any accident at sea, which may prevent its arrival. It would therefore seem easy enough to calculate pretty nearly what will have to be added to the supplies already received at any particular port. But unfortunately this information is not to be obtained of any individual at places of large importation. Each merchant can tell what he has to arrive himself, but he cannot answer for his neighbors, and even those close observers who keep their eyes on what is going on, and whose ears catch the slightest whispers on the wind, till they think they could tell you on their fingers every timber ship afloat for their port, are not unfrequently thrown completely out of their reckoning by arrivals on consignment, or for

merchants too remote, or apparently too inconsiderable, to have entered into their calculations. Thus it happens that there is always a degree of uncertainty as to how the season will terminate till the weekly list of arrivals thins down to a few stragglers, and finally comes to be disregarded as no longer having power to affect the markets.

This is the time, therefore, that the attention of the leaders of the trade is turned into a new channel. The vicissitudes of one season being at an end, let us see what the prospect is for the next, which will soon be upon us, and whether the sailment points within the sphere of our observation are capable of guiding us to a right conclusion as to the kind of business that will be done when the shipping ports re-open, and how prices are likely to rule in order to render the demand in this country equal to the supplies which the shippers abroad are preparing for it. Our Swedish correspondent to whom we have already referred throws out some very useful hints in this direction in his letter of November 18th, published last week on page 356. He had already repeatedly dwelt on the heavy stocks accumulating in Sweden, notwithstanding the shipment this year of 100,000 standards more than in 1881, and in fact the largest export ever known from that country, and he now warns the millowners of the state of the markets abroad, in order to induce them to put some limit on the quantity to be cut this winter, if they do not desire to see prices go down in the scale below a remunerative point. But we all know to what this sort of admonition generally amounts. Everybody admits its correctness, but each in his own case is apt to find some excuse for not observing it. We all think that if we curtail our transactions, some neighbor in the same line will extend his in the same proportion, and the only result of our cautious reserve will be that he takes from us a part of the business which we ought to have done. "Besides," they reason, "are there not other countries which will flood the British markets by all that we refrain from shipping?" Then they resolve probably not to limit the cut so much as to try and diminish the cost of obtaining it. The apprehensions suggested form a good argument for abridging their expenses, and the lumbermen are informed that their services are not required to the customary extent and they can only be fully employed at a reduction of wages; so that, if prices must give way, the millowners may at any rate be able to suffer the abatement without being losers on the sales they effect. Though this may not be literally true of the state of trade in Sweden, it is towards this sort of conclusion that it is drifting by the force of circumstances and the present state of the markets, to which it looks for the disposal of its produce. And as Sweden, with which Norway is associated as the prime source of the British supplies of building timber, leads the other European shipping countries, we may assume that as great efforts will be made this winter as ever there were before to get as much timber forward for shipment next season as the resources of the merchants will enable them to accumulate at their respective wharves.

From our North American Colonies no great increase of supply is likely to come to market. There has been some falling off in the shipments thence this season, which it is too late now to make good; and as prices continue firm there, and freight is too high for speculative charters, it is likely that no more than a good legitimate business will be done from that direction next year. The south country pine, however, is irrepresible, and knows no diminution. It is said also to be growing in favor, and perhaps no timber imported is chargeable with less waste in conversion, as it can be bought square-edged in considerable bulk, and is seldom objectionable on account of coarse knots and shakes.

In the estimation of probabilities as to future prices we have always considered that this wood was hardly sufficiently taken into account; but it is a material which steadily operates against an advance of prices, and is likely to be a greater check on them hereafter than it has hitherto been. Old contract forms still demand the kinds of timber that have been held in preference for ages, because they were chiefly accessible in those days, but as the utility of pitch pine is more generally known, its cheapness in

proportion to quality will have its natural consequence, and by and by it may be insisted on in place of other kinds that have hitherto been preferred to it. At all events, it is coming to this country in increasing quantities, and has to be reckoned with when we are estimating the probabilities of our supplies and the tendency of prices. If trade continues good—which is not now so flourishing as it has been—the prices of imported timber may hold their own at about the level of the present rates both abroad and at home; but there does not appear to be anything in the facts at present available to justify us in looking for better prices next year than the average of those which have been realized during the present.

THE TRADE IN QUEBEC.

Quebec, Dec. 13.—This morning's *Chronicle* has the following remarks on the lumber trade during the year:—

"In this, the chief trade of the port, we are informed that the season has been fairly prosperous. At the commencement of the season shippers had only very small wintering stocks to deal with, but these were augmented in June by the arrival of about three million feet of white pine from the Ottawa, the greater portion of which was timber of the previous year's make, stuck in the streams in consequence of the unprecedented lowness of the rivers, the balance being now rafts of small average; and all this was rapidly absorbed as the spring and summer fleet continued to arrive, so that when the main bulk of the new wood reached market, the merchants were comparatively bare of stock, a position which was turned to practical account by lumbermen who held on to their rafts until shippers found themselves forced to meet the position. Notwithstanding the comparative inactivity that was evident in the months of July and August, a reaction quickly set in when the fall ships began to make demands upon the limited stocks in shippers' hands, and during the following two or three months very large purchases were made by the trade at full prices, notwithstanding the inferior general character of the Ottawa pine this season. Really prime rafts are said to be quite the exception, and it is also equally rare to meet with rafts over 53 feet average, so great is the falling off both in size and quality, and it is said that this will become more apparent each year.

"Although we find at the close of the season that the stock of white pine is about two million square feet in excess of last year, it must be kept in view that this winter there is not a single raft left behind in the Ottawa streams, against about two million last year, and in addition to this, it is known that new timber will each year be later in reaching market, and very few rafts of the better class of white pine can possibly be delivered in Quebec before August. This remark stands good also as regards waney board, pine, oak and other hard woods from Western Canada, Ohio and Michigan. So that, regarded as a whole, the wintering stocks of timber in Quebec will be barely sufficient for the loading of even a small spring or early summer fleet.

"The enormous advance in the cost of all descriptions of labor employed in the woods, and the enhanced value of provisions will increase very materially the cost of production, and it has this autumn been almost impossible to obtain the usual number of skilled axemen, many manufacturers have curtailed their operations in consequence.

"Oak is low in stock, very little wintering at Garden Island, and the production of Ohio and Michigan wood is now in so few hands that it is not anticipated that this wood will ever be cheaper in this market than it is to-day, and the commoner description of Canada oak is not appreciated by the trade at even a heavy reduction in price.

"In pine and spruce deals we are informed that the English markets have been far from satisfactory, the London market especially having been paralyzed by large stocks of last year's importation remaining in the hands of certain importers there, and causing buyers to hold off in the belief that they would be able to buy on easier terms. Shippers must obtain higher values for both these articles if they are to continue

to export them, and as the manufacture will probably not only be curtailed this winter, but the cost of production will be materially increased, an advance in price must follow. All contracts made for next year's delivery of spruce deals have been at an advance, and all the stocks of this wood are now in the hands of shippers.

"With the United States, trade in small lumber during the past season has been good, and anything for sale could be disposed of there for good prices. Lumber shipments to the River Platte are also on the increase, the majority of which are made from Montreal. Deal shipments to England by steamer are also largely made from Montreal, but all from account of Quebec shippers.

"It might be well to draw the attention of those interested in the deal business in Quebec to the very large quantity that have been shipped this year in Montreal, the chief inducement being that the cost of loading ships there is so much lighter than in Quebec, and both steamers and sailing ships give a decided preference to taking their cargo there. Montreal as a shipping port for deals will in consequence of this become each year more popular, and unless considerable restrictions are removed in regard to the labor question in Quebec it is becoming quite evident that this branch of business will go from us in a very short time.

"One feature which has told heavily against the trade this year has been the exorbitant rates charged by the English marine insurance companies, rates for which there does not appear to have been any proper justification, and it would seem to be a good time for capitalists on this side to establish a company or companies which will charge reasonable rates on all risks.

JUDGMENT REQUIRED.

The *Northwestern Lumberman* says:—To the unthinking, lumber is lumber, and they do not reflect that there is anxiety on the part of the manufacturer to turn out a season's cut that will all be called for. The lumber manufacturer must anticipate the future the same as the dealer in dry-goods or any other commodity. He is liable to have a large stock of certain sizes on hand that is slow of sale, and possibly will not sell at all except at a reduction that cannot be afforded, the same as the merchant in other lines is liable to have a stock of unsalable goods left on his hands. The general use of barbed wire for fencing has taught the manufacturer that he must saw less of his timber into fencing than he did a few years ago. He must anticipate the amount of building that will probably be done, and if he calculates wrongly the dimension of his yard will be a drug, or he will have orders for it that cannot be easily filled. It is seemingly an easy job to draw logs into a mill and slash them up into lumber, but it requires good judgment to know how to saw them into the sizes that will be most called for.

The Growth of London.

The *Timber Trades Journal* says:—

"Perhaps the readiest method of conceiving what the consumption of wood in London must be is to make note of the fact that during twenty years the population increased from 3,222,000 in 1861 to 4,764,000 in 1881, or an increase of 47 per cent. London, then, has been increasing at a rate nearly double that of the rest of England and Wales, which has increased at the rate only of 25 per cent. London has 100,000 more inhabitants than the whole of Scotland, and about 400,000 only less than the whole of Ireland, while it exceeds in population such countries as Sweden, Holland, and Portugal. Further than this must be reckoned the circumstance that during the past twenty years it has become a much more general practice to reside outside London. In reckoning the consumption of wood in the "Modern Babylon," the immensity of suburban London must be taken into additional account.

DAUGHTERS, Wives, Mothers, look to your health! The many painful and weakness diseases from which you suffer, dispairing of a cure, can be remedied by that unfailing regulator and purifying tonic, Burdock Blood Bitters. Ask your Druggist for proof.

TIRED OF SUFFERING.

An Ex Police Officers Story—The Agony is Over—"It Did Not Fall Him."

(Sacramento (Cal.) Record Union.)

Mr. M. Hymen, proprietor of the Pioneer Store, No. 102 J street, is now one of the happiest men in Sacramento, whereas a short time since the fields for him strove in vain to look gay in their garb of winter-green, and the sunshine of California was as a glimpse of the midnight sun at Spitzbergen. He had the rheumatism. What man tortured with rheumatism can delight in the beauties of nature or care a fig whether the sun shines or not? Mr Hymen did not know what to do about it. He had taken the prescriptions of physicians, but the dull, dead ache and the horror and dread agony were still there. The heavens to him were as though covered with the pall of unending night. Others might smile, but Mr. Hymen found no cause to allow a ray of mirth to creep into his face. This sort of thing had gone on with him at intervals for years, and there seemed no help for him. But the poet tells us that the darkest cloud has a silver lining. The darkest hour is always just before the dawn. There was help for him—relief present and permanent for his racked body. At last some one told him of the Great German Remedy, St. Jacobs Oil. What! use a mere liniment, after exhausting the skill of doctors? Why, it is madness to talk of it! "Well, just try the Great Remedy," said the voice of his friend. He tried it. "What is this?" Relief! He tried it again. More relief! "Is this the wand of the Magician? Yes, it is relief—sweet relief, after wakeful nights of agony and days long drawn out with "suffering!" At last he had discovered the solution of his trouble. He was cured. Since this happy recovery the gentleman cannot say enough in praise of the Great German Remedy. He advises all to use St. Jacobs Oil for rheumatism. He says there is nothing under the dome of the universe comparable to it as a pain annihilator. His recommendations in the past few weeks have been the means of selling hundreds of bottles of the wonderful specific, and many are glad of the time when he urged them to use it. His was a wonderful cure.

Mr. W. B. Ferrall, the well-known policeman of this city, has also felt the powerful friendship which the St. Jacobs Oil extends in the hour of physical suffering. Mr. Ferrall was severely afflicted with rheumatism. He got tired of suffering, and determined to call in the aid of the grand old specific. It did not fail him. The disease was deep seated and declined to yield without a struggle; but the application of two bottles of the Oil made it fly away and cease from troubling. He is now well and hearty. He recommends the afflicted to rely on St. Jacobs Oil as the most ready and efficient cure for pain in the world. Captain O. O. Laraway, who runs that most thriving and well stocked grocery, corner of Sixth and N streets, is a great sufferer from neuralgia. While the reporter was in there the other day waiting his turn for supplies, the Captain told him that the Great German Remedy was a powerful liniment. It has relieved him of neuralgia, and given him many hours of ease. His clerk also owned to having had the backbone taken out of some ugly rheumatic pains which had possessed his legs, much to his annoyance, for some time.

The foregoing should convince even the most skeptical that the article in question is indeed a great remedy and conquerer of pain. "We endorse it," is heard on all sides.

TREE CULTURE.

A Minnesota farmer says—I have five acres of young forest trees growing. Broke the land in 1875—6 and sowed to grain for three years, and planted to corn the next year, and trees planted in with the corn. Trees consist of cottonwood, box-elder, and Lombardy poplars. The cottonwoods are seedlings pulled up along the Redwood River, also the box elders; Lombardies were cuttings. The cottonwoods grew from three to five feet the first year. The box elders did not make much growth the first season, barely lived through. About two-thirds of the cuttings lived and made a growth of two feet. The cottonwoods have continued to keep the start, and are now from ten to twenty-five

feet high and make a splendid wind-break. The box elders are doing well now, but do not grow as well as cottonwood, but make a fine shade tree. The Lombardies are growing fast now. I use the plow when they are small; after they get larger the cultivator; am careful not to cut the roots when cultivating. Have never mulched them; think good cultivation is better.

TROUBLES IN THE TRADE.

The Montreal Star of Dec. 13, says—A meeting of the creditors of Messrs. W. J. Pope & Co., lumber merchants, of Charlemagne, P. Q., was held yesterday afternoon in this city, when a voluntary assignment was made to Messrs Thomas Darling and Charles Lacaille. A large amount of litigation may be expected in connection with the estate, as the assignees have been ordered to contest the deed of transfer of the establishment at Charlemagne and the timber limits to the Exchange bank and to Messrs. Brossard, Chaput & Co., which was made a few days ago. Immediately upon this transfer being executed, a seizure was taken out by the other creditors, the affidavit in support of which alleged that the firm was making away with its property with intent to defraud the creditors. Upon the action being taken the firm called the meeting of creditors alluded to above. The claim of the bank to the lumber will also be contested. This claim is based on the fact that they held warehouse receipts on the logs, which extend to lumber derived from them. The unsecured liabilities of the firm amount to \$94,000, while the assets are nominally \$83,000. In addition to this there are mortgages amounting to \$36,500 on the real estate, which are fully secured. The majority of the creditors are in Montreal, the largest being the Exchange Bank, \$50,000, and Messrs. Brossard, Chaput & Co. \$15,000.

**CASTORINE MACHINE OIL
CASTORINE AXLE GREASE**

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LUMBER MERCHANTS
And Shipping Agents,
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CHOPPING AXES
(Made to Order and on hand)
MILL PICKS DRESSED in a first-class style. Those shipped by rail will be returned promptly.
Lance Tooth Saws Gummed. AXES WARRANTED.
W. HERLIHEY, Lindsay.

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Circular, Cross-Cut & Machine Saws
Gummed and Hammered on Short Notice.
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Wholesale Lumber Dealers
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We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
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THE CANADA LUMBERMAN

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

Terms of Subscription :

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Per line, for six months..... 50
Per line, for three months..... 30
Per line, for first insertion..... 10
Per line, for each subsequent insertion to 3 mo's..... 06
Cards not occupying more than 12 lines (1 inch) per annum..... 8 00
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Advertisements intended for insertion in any particular issue should reach the office of publication at least four clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. JAN. 1, 1883.

A NEW VOLUME.

WITH this number we begin a new volume of the CANADA LUMBERMAN, and we cannot look back without congratulating ourselves upon the success of our venture, for such the establishment of a new journal always is. We feel that for this success our cordial thanks are largely due to our subscribers, correspondents and others who have given us support, encouragement and assistance, not forgetting that most important class in a business point of view, the advertisers who have favoured us with their patronage.

From our own observation and from the assurances of many gentlemen occupied in the lumber business we felt that there was not only room, but a demand, in Canada for a journal specially devoted to the interests of the trade, and the result has shown that we were not mistaken. To give an idea of the kindly appreciated of our labours we will give brief extracts from two out of many flattering communications we have received.

Mr. J. K. Ward, of the Mona Saw Mills, Montreal, writes:—

"We are pleased to receive the CANADA LUMBERMAN and to be counted among its readers. We receive other papers devoted to the lumber interests, but none more acceptable than yours. We hope it will meet with all the success it deserves."

Messrs. Olmstead & Appleton, of Collingwood, write:—

"We are much pleased with your paper, being a journal much needed, and wish you every prosperity."

With such encouragement, other instances of which we might give, we feel moved to persevere in our rather arduous task, and to make further efforts to render the CANADA LUMBERMAN in the future still more useful and welcome

to the great industry whose interests it serves. We will conclude by thanking these kind friends and others who have given us their support in a more tacit manner, and to all of them we heartily wish a happy and prosperous New Year.

LARGE quantities of square timber for the ship yards, and spiles for docks, are being hauled into Bay City, since the snow-fall.

PARRSBORO', N. S., owns 17,000 tons of shipping, and over 10,000,000 feet of deals and deal ends were shipped from there this season.

THE River and Streams Bill which has been twice disallowed by the Dominion authorities has been introduced a third time in the Ontario Legislature.

CUTLER & Eddy will get out 3,000,000 of cedar logs in the country around the St. John river, on the borders of Maine and the province of New Brunswick, where operations are heavy. They will turn out 30,000,000 shingles.

A Kingston despatch says Mr. P. McLaren's Mississippi saw mill is to be doubled in capacity, and laths, shingles, and pickets manufactured. This will be the centre of McLaren's operations for the cutting of lumber and timber. The chief depot for the shanties is near this place.

A DESPATCH from San Francisco, dated Dec. 22, says:—San Francisco, 22nd.—The coast survey steamer has returned from a seven months survey of the southern coast of Alaska, where several excellent harbours were discovered. The officers speak enthusiastically of the timber resources of that region.

It is said that Mr. James Bothams will go to England at the end of January to move before the Judicial Committee of the Privy Council for leave to appeal from the decision of the Supreme Court of Canada in the celebrated case of McLean vs. Caldwell. This is the case in reference to the use of streams by lumbermen.

THE *Northwestern Lumberman* says—Hurd, Hotchkiss & McFarlane, the Adirondack wilderness invaders, have made an application to the state land commissioner at Albany for all the unsold lands belonging to the state, aggregating 4,584 acres in township 14 Franklin county. The land was ordered sold at \$2 an acre—cheap enough.

North and South says:—It is stated that a western furniture firm has sent a man to the Piedmont region of the south and thereabouts with orders not to return until he has secured 100,000 acres of suitable woodland; while others are taking similar action. The value of southern timber is gradually becoming known. About the time all the choice woodland in the south is gobbled up by western and eastern investors, our own people will become conscious of what vast wealth we possess in our forests.

On a tract of pine near Grayling, Mich., owned by Englemann and C. B. & E. C. Lewis, two camps are located. There are 70,000,000 feet on the tract, which surrounds a lake that is five miles long, and at the nearest point three and a half miles from the Manistee river. Into this body of water the logs will be rolled, and towed to the point in question, from which a railroad will be built connecting with the river. The logs will be drawn from the lake and loaded on cars by means of an endless chain.

THE *London Timber Trades Journal* says:—Holders of spruce deals express the utmost confidence as to prices. The opinion has been openly expressed by large holders on the west coast that they will yard and hold rather than accept any other than remunerative figures. It is said that even this side of the new year we may possibly see a small advance occur. A member of a leading firm of west coast importers has remarked that he confidently anticipates that £9 will be realized during the early months of the forthcoming year.

THE *Manistee Democrat* says:—A quarter of a mile of railroad track is being laid from the new depot grounds to the edge of the lake, just north of M. Englemann's saw mill, for his use in shipping lumber and bringing logs to his mill. He has contracted with the F. & P. M. road to haul 3,000,000 feet of logs from Chase to his mill this winter.

A RECENT work on Florida says:—It is a fact familiar to lumbermen in Florida that less than thirty years is necessary to restore to land once cut over a new supply of mill stocks. Indeed, it has been authoritatively asserted by parties familiar with the premises that in the country tributary to Pensacola, even with her immense mill capacity, the timber grows faster than it can be cut off.

THE *Montreal Gazette* informs us that:—“Lumbering operations on a large scale are being proceeded with in almost all sections of St. Francis District. In the township of Stoke a large amount of spruce deals are being got out, the lumber in the log to be driven to Windsor and sawn there for the Quebec market. The British American Land Company are also operating largely in the township of Orford for their mills in Sherbrooke, the Berlin Mills Co. at Lake Megantic and Messrs. G. B. Hall & Co. in the same locality on the Chaudiere.”

At Ottawa, on Thursday, Dec. 21, the timber limits belonging to the firm of Thomas McTierman & Co., which have been the subject of litigation for nearly three years, were sold under an order of the Court of Chancery, and the prices obtained were the highest yet reached in this district. Thirty square miles were sold to Perley & Patten for \$78,000; 50 square miles to Mr. J. R. Booth for \$61,500; another lot of 50 square miles to Mr. Booth for \$46,500, and a further lot of 15 square miles to the same gentleman for \$22,100. The total amount realized was \$208,100.

A VERMONT correspondent of the *Northwestern Lumberman* says:—Our forests are being cut over too fast. Ten years at the same rate of cutting will exhaust the spruce forests of northern Vermont, and we cannot now see what is to take the place of lumber, or where a supply is to come from. From careful inquiry, I think that in this little north corner of Vermont we produce fully 80,000,000 feet of spruce, besides hardwood lumber and cedar shingles to a considerable extent. In addition to this, some 40,000,000 feet are taken from our state and run down the Connecticut river to Massachusetts and Connecticut yearly.

THE *Lake Superior News* says:—The lumber business of Duluth is by far the most important industry yet developed here. To show our readers how this business has increased we would state that during the winter of 1880 only about 80,000,000 feet of logs were got out in this district, and last winter 175,000,000 feet were cut—showing an increase in 1881 of more than one hundred million feet over the cut of 1880. This year there is a corresponding increase, the total being 312,000,000 feet, showing an increase for this year over last of 137,000,000. Itemized reports from the different camps show that there are some 3,500 men at work, a good sized army, but some put the number of men in the woods as high as 4,500.

THE *Lake Superior News* says:—A number of Michigan men are reported to be in Duluth trying to purchase mill sites. There is plenty of chance to buy such property in Michigan and we venture to say we can show up a better mill site here on Portage Lake, by a—site, than any they have in Duluth.—*Hancock Journal*. It is quite evident that the editor of the *Journal* has never visited Duluth or he would never talk in such a reckless manner as the above. We would like to inform him that no place on Lake Superior has as desirable sites for saw mills as Duluth. Again Mr. *Journal*, lumbermen desire something more than good sites. They want a good market and a vast supply standing pine. And this is the reason Michigan men are coming to Duluth instead of locating on Portage Lake.

PACIFIC COAST REDWOOD.

The wastefulness of this lumbering is one of the striking features of the scene. Only the largest trees are cut, those measuring less than two feet in diameter rarely being touched, and the axe is laid, not to the roots (though they are not thick and widely divergent, considering the height and weights they support), but some distances above, so that in very large specimens the massive stump, upon whose flat top you might build a comfortable house, stands ten or twelve feet above the ground, and contains hundreds of feet of sound lumber, which must be left to rot or burn. Then many trees are broken by their fall, so that large parts of them are useless; other parts may be knotty, or crooked, or inconvenient to drag out, and so only half of a great trunk will be utilized. Hugo logs are consumed, also, in road-making and bridge-building in the hills, and dozens of small trees are crushed by the fall of their greater companions. Then, when a district is pretty well cleared of its best timber, fire is set in the bush and prostrate trunks. Feeding eagerly upon the resinous woods, half dried and broken, it gathers so much heat that the saplings are nearly all killed, and the flaky tinder-like bark of the larger trees is singed in a way which must greatly injure and often destroy them. Moreover, these fires, fanned by the gusty breezes rushing in every afternoon from the ocean, often get beyond control, and sweeping through the cily tops and brittle trunks, spread blackened ruin over miles and miles of precious forest. Precious, however, it seems never to occur to the lumberman these forests are; yet he is probably no more wasteful and careless here than elsewhere, and finds his match for heedless extravagance in nearly every pursuit that deals in what nature furnished us at the outset in abundance, but replaces only very slowly, giving abundant leisure for our repentance. The spendthrift lumberman is bad enough, but no worse than the wasteful oysterman or buffalo-hunter, reckless of the future. It is, or ought to be, a matter of rejoicing to everybody that the Forestry people, under Mr. Sargeant's guidance, are paying especial attention to preserving as far as possible the magnificent forest of the Coast Range.—Ernest Ingersoll, in *Harper's Magazine*.

A HOLIDAY SLAUGHTER.

THE *Northwestern Lumberman* says:—The spruce and fir forests of Maine are now suffering extensive inroads to supply Christmas trees and evergreens for the holidays. The business is particularly heavy along the line of the Knox & Lincoln road, having grown to an important extent year by year. The trees leave the state at the rate of many carloads a day while the holiday traffic lasts, and, as everybody knows, are used in a variety of ways for trimming stores, churches public places, homes, etc., before the conventional Christmas eve arrives. The state of Maine is a main source of supply, though evergreen is obtained from various sections of the country. The supplies have been so drawn upon that the forests are showing it, and the sacrifice continues, and will so long as people cry for luxury, and the handlers can coin money, as many do at present. If 100,000 young trees were swept away yearly, even in Maine alone, it would be only the conservative and sensible ones who would lament. The merry-makers rarely reflect that they are denuding more of nature's tree store for one item of general enjoyment than all the forestry societies in the country could replace in years. Warren is one of the great distributing points in Maine for the sale of evergreens for Christmas, and scattered through the state are several firms doing an immense business.

TROPICAL TIMBER.

The furniture and dyo-woods that abound in the forests of the West India Islands, on the bays, inlets and rivers of the Caribbean coast of northern South America, and in the maritime regions of Central America, Guatemala, Yucatan and Mexico, have for over 200 years been an important feature in the commerce of America and Europe. The forests that supply these woods have been cut away along the tidewater to such an extent that it is now more costly than it was to get the timber to places of ship-

ment, and the governments of the several Spanish American republics that embrace these forests are making efforts to construct railroads from the seaports to interior points. British Honduras, Guatemala, Spanish Honduras, Costa Rica, Nicaragua, Colombia and Venezuela are awake to the importance of railroads, and lines are in progress of construction in those countries that will penetrate their vast forests, and bring to the coast cedar, sapodilla, mahogany, zapote, fustic, logwood, and all the varieties of furniture and dye woods. These countries abound in valuable woods, not yet known to commerce, that will be brought to view when the localities in which they grow are opened up by railroads. Within the last three or four years several enterprising merchants of New Orleans have turned their attention to this valuable trade. The house of H. Otis sent men into various intortropical countries to procure their peculiar woods, and purchased several schooners to freight them to the New Orleans market. Since this undertaking the trade has greatly increased, and the dealers at the Crescent City hope to rival eastern markets in this branch of commerce.—*Northwestern Lumberman.*

FORESTRY.

The Chicago *Lumber Trade Journal* says:—Much valuable reading has of late been published in reference to the relation of the influence of forests upon streams, and those who perhaps know best, from a scientific standpoint, urge a consideration upon the most plausible ground. Ample and commanding illustrations to support their assertions have been produced, with many facts to which the thoughtful are inclined to attach weight.

It is within, doubtless, the memory of many observing men who have from necessity been constrained to plant trees after settling in a section where there was no timber to recall the moisture that followed dryness of the soil, when the small sprigs or the seeds which they had planted or sown years before were grown to a considerable size, owing of course to the nature of the leaves of the trees to retain moisture. Wherever there have been forests, streams of every size could be seen, but just in the ratio that the timber was removed in any quantities the streams diminished in volume, until not a few instances bore witness of the complete disappearance of the water almost simultaneously, with entire depletion of the forests. The truth of these very instances were in some cases corroborated by the dried channel filling, up with water, when after some years the old forest land again reveled in the product of new trees.

This points strongly to the necessity of not merely reforesting for the supply of material which will always be needed in the construction of building and improvements, but because of the varied mechanical and commercial enterprises which rely upon the river. The past in this respect holds out to the present an ominous warning which wise discretion will heed and obey, and instead of lands disrobed of the great timber resources, we will be able to see in teeming forests the fruitage of wise judgment and careful work.

ADDITIONAL IMPROVEMENTS AT THE TANITE CO'S WORKS.

It is only a few months ago, that we chronicled the enlargement of the Tanite Works by the addition of several large buildings, which are moreover among the most substantial structures of the kind in the county. But "Tanite" is a synonym for busy activity and energetic progress. It would be unusual for a monthly visitor to fail noting on each return some important improvement. The new store house, 24x40, two stories and attic, which became a necessity with the rapidly increasing amount of work turned out, is now thoroughly finished. The Company have also just built a new casting shed 16x30, one story high. They have also just completed the extension of the boiler shed, adding 19 feet to the original one, which is now 50 feet long. They have just put in place a new horizontal boiler, built by Tippet & Wood, of Philipburgh, N. J. It is one of 65 horse power, fifteen feet long and five feet in diameter. It has 45 tubes which are four inches in

diameter. This boiler is in addition of course to one of the same size in present use. They have also just added to their machinery a new Worthington double acting steam pump, to be used as an auxiliary to the "Niagara" (Campbell & Hardick) pump now in use, both for boiler feeding and for use in case of fire

A REMARKABLE INVENTION FOR THE MANUFACTURE OF SIDING.

The *Lumberman's Gazette* of Bay City, Michigan, says:—The manufacture of rift-sawed siding is becoming quite a prominent industry in Manistee, and already several machines have been invented for its production. Only a little while ago Horace Tabor came out with a machine, and was followed very closely by S. Babcock with another. And now along comes another, the product of the inventive genius of R. G. Peters.

Mr. Peters' machine differs principally from the others in that the siding is manufactured from the whole log—the other machines requiring that the logs first be quartered.

When the log is rolled on the carriage a couple of jacks, directed by a lever in the hand of the Sawyer, elevate the log to the proper height, and it is then fastened in the centre of each end by stocks, which are connected with the set gear. The set is so arranged as to give any desired thickness or taper. The log revolves around until it is entirely circled and cut into siding. Two saws are on a perpendicular shaft and cut the siding the proper width, while another on a horizontal shaft cuts it from the log. These saws are in an adjustable saw frame, and can be raised and lowered in a instant, to accommodate any size log. If the log is large enough, after the first cut around is made, the saws are lowered and the operation repeated until there is nothing left but the heart, which is invariably consigned to the shingle mill and is there manufactured into shingles. The machine also cuts flooring as readily as siding. Its capacity is put at 30,000,000 feet of siding per day.

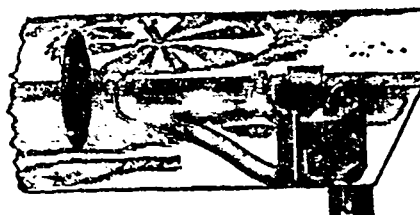
The chief advantages in the manufacture of rift-sawed siding are, that more clear lumber can be got out of a log than by any other means. The saw cuts toward the centre of the log, and of course does not cross the knots. The siding is not nearly so apt to warp or check.

Lumbermen in St. Louis.

St. Louis, Dec. 20.—Seventy-one persons representing the lumber interests of Michigan arrived here to day. They represent firms in Grand Rapids, Muskegon, Grand Haven and other western Michigan points which are handling 1,250,000,000 feet of lumber annually. The lumber stacked up awaiting shipment in the cities of Muskegon, Whitehall and Grand Haven, and Spring lake amounts to 300,000,000 feet and the furniture interests of Grand Rapids alone amount to \$6,000,000 annually. To-day these dealers met the lumber dealers, planing mill owners, and heavy furniture dealers of St. Louis and entered into direct business relations with them. The new departure is made practicable by the extension of the railroads throughout the western part of Michigan and the connections just made with the Wabash and other lines, the enterprise of the lines most interested and the readiness of the wide awake business men of the region to improve an opportunity. The excursion will be continued to Kansas City, and the delegations will return by way of Chicago, whose lumber dealers will by this new move be cut out of a vast amount of business.

A Camp Scourge.

The hardy pioneers who first settled the country north and west met with untold hardships and perils. They not only had the wild animals of the forest to contend with, but were opposed by savage hordes. All that they suffered in various ways will never be known. In those days men went abroad and took their chances on what came, but such has been the advance in civilization that a single panther in a section of pine woods will scare the gail out of all the loggers in the district. Near a camp in the vicinity of Grayling, Mich., one of these animals has recently been several times seen and heard, its wild half-human cry falling with a chill on the ears of those who heard it. One



TO MILLMEN!

HODGSON'S Patent Saw Grinder

Is a new, efficient, and exceedingly cheap machine and is equally well adapted to grinding long and round just were wanted as easily as a file. It is just THE THING for mills, cutting from one to five million feet of lumber, and costs no more than one-fourth to one-tenth the price of little better machines. It is patented in United States and Canada, and is made in Welsport, Pennsylvania, and in Anlierat, Nova Scotia.

Hodgson's Patent Monitor Shingle Machine

combines, at a moderate price, more points of excellence than any other. Jointer is built in machine, a few inches from the saw. The cast steel feed rolls are opened by a foot lever, and grip the block like a vice. Traverse of carriage to suit large or small stock, is under control of operator when running. Will run for days without cutting a shim. Warranted to cut, with one attendant, three thousand in an hour, under torture of \$100. Send for circulars to

T. HODGSON, AMHERST, NOVA SCOTIA.

CURRIE BOILER WORKS

ESTABLISHED 1852

MANUFACTURERS OF

STEAM BOILERS.

NEW and SECOND HAND ENGINES and other Machinery

on Hand and for Sale.

CURRIE, MARTIN & Co.

Esplanade, Foot of Frederick Street, TORONTO.

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of the men became acquainted with the savage cat in a way that he did not appreciate. While standing on the banking ground he observed the animal swiftly stealing toward him with characteristic slyness. Reaching a point a few feet from him it crouched for a spring, the swish of its tail sounding ominous enough to the unarmed man. At the right moment the cries of a number of men who came up frightened away the panther. The men have now become so thoroughly frightened that one of them could not be hired to go away from camp after dark. *Northwestern Lumberman.*

Sale of Timber Limits.

The Ottawa Citizen of Dec. 22nd, says:—This afternoon the timber limits belonging to the firm of Thomas McTiernan & Co., and which have been the subject of litigation for nearly three years, were sold under an order of the Court of Chancery in the suit of McTiernan vs. Fraser. There was a large attendance of prominent lumbermen from the Ottawa Valley, and the bidding was very brisk. The sale was conducted by Mr. W. M. Matheson, the Master in Chancery here. The prices obtained were the highest yet received in this district, although the limits are very valuable. Parcel No. 1 containing thirty square miles, was purchased by Messrs. Perley & Pattee, for \$78,000. Parcel No. 2, containing fifty square miles, to Mr. J. R. Booth for \$61,500. Parcel No. 3 containing fifty square miles to Mr. J. R. Booth for \$46,500, and parcel No. 4, containing fifteen square miles, to Mr. J. R. Booth for \$22,100. The total amount realized was \$208,100. The terms of sale were ten per cent cash, twenty-five per cent within twenty days, and the balance within four months from date of sale.

Hogs and Young Pine Trees.

A correspondent writing from Johnsonville, S. C., incidentally mentions a curious instance of the influence of animals in controlling or preventing forest growths. It appears that the fondness of hogs for the juicy roots of young pines leads them to seek them assiduously, so that where hogs are allowed to roam in that region one can hardly find a young long leafed

pine in a thousand acres of pine forest. There being no young trees to take the place of the old ones used up by the lumbermen and turpentine gatherers, that species of pine timber is rapidly being exterminated.

This recent fire in Kingston, Jamaica, has created quite a demand for vessels to load lumber for that port. Four have been chartered from St. John, N. B., within a few days.

The Orillia Packet says—Mr. P. Christie has a number of men employed in framing timber for a new mill, to be erected upon the site of the old one at Sturgeon Bay. The new mill will be 44x100, and have a capacity of about 40,000 feet of lumber per day. It will also contain 2 shingle and 1 lath machine, all provided with the most modern improvements and facilities. Mr. Christie expects to have his new mill ready for manufacturing next March. During this winter he intends to get out a large stock from his extensive limits and now has actually four camps in operation, as well as many jobbers at work. A well known Orillian, Mr. W. E. Armstrong is mill foreman, which position he has held for nearly three years.

Wanted.

A PARTNER that understands the SAW MILLING BUSINESS, with capital. For information address JAMES B. DICKSON, Pembroke, Ont. 2116

MINNESOTA PINE LANDS FOR SALE.

THE SUBSCRIBER OFFERS A TRACT OF 8,000 ACRES

OF PINE LANDS, in St. Louis County, Minnesota, carefully selected and estimated to cut FORTY MILLION FEET, well located on good driving stream, tributary to Duluth.

A. McCALL, Lumber Merchant, Simcoe, Ont.

QUEBEC.

The *Chronicle* of Dec. 14th says:—The annual trade circular of Messrs. J. Bell Forsyth & Co., merchants of this city, has just been published at our office. As usual this valuable resume of our most important branch of trade is carefully and reliably compiled, and reflects the greatest credit on the house of our enterprising townsman, from whose establishment it has been issued. The circular shows at a glance, the supply, export and stock wintering, together with comparative statements, current prices, &c., &c. We need not impress on our readers the advisability of their securing their supply of copies early in the day, so as to meet the outgoing mail steamer for Europe, which leaves Halifax on Saturday next. Meanwhile, we must take a rapid glance at the contents of Messrs. Forsyth's circular. There has been considerable falling of in the number of arrivals of ocean steamships as well as of sailing ships, during the year, but the number of vessels trading to the lower St. Lawrence and Maritime Provinces, on the other hand has increased somewhat. On the whole, the year now drawing to a close, has been a satisfactory one to our business men, all things considered. There has been no over production, and the trade in lumber and timber as a rule has been conducted on a sound and healthy basis. The manufacturers have been especially successful, and the past winter has been propitious for operations in the woods. The season opened without much request for white pine, the great staple of the Quebec trade. The export houses were apparently well supplied, and the outside demand was limited, and beyond a few rafts which had been contracted for during the winter and early spring few transactions of any volume took place until about August, when something better was reported. Some lots were disposed of at fairly remunerative prices to the producers, and by the end of the season but few lots remained for sale in first hands. The present stock wintering, though somewhat in excess of that of last year, is under the average, and shows the whole quantity available for spring and summer needs. There is still a difficulty, noted in the circular, in procuring first-class wood, and many of the old limits have become exhausted or have passed into the hands of mill-owners. A portion of the new and more remote timber regions has been, up to the present time, inaccessible to the lumberman. In the stock reported to be on hand, there is a larger quantity than usual of inferior wood. Much of this, however, will be utilized in the extensive public works and other improvements now in course of construction. The estimates of the probable "cut" on the Ottawa and St. Lawrence for this winter, show that the supply for 1883 will not more than equal that of 1882, premising that the entire crop reaches market next season,—a supposition by no means certain. The demand for Canadian white pine has been very fair throughout Great Britain, and the stocks at present held in the principal markets there, are light.

This comparative statement shows the supply export and stock of white pine during the years 1881 and 1882:—

	Supply	Export.	Stock.
1882 Square	3,023,036		
Waney	3,127,129	7,912,160	
1881 { Square	6,039,041		
Waney	3,065,274	9,101,830	
1882 {	6,532,152		
Waney	3,354,943		
1881 {	4,524,162		
Waney	1,519,950		
1882	1,474,571	1,024,680	2,362,624
1881	1,945,720	922,000	2,143,933

In oak, we learn that there has been good demand for prime wood, just now a scarce article. The difficulty in obtaining choice standing tim-

ber, the increased cost of manufacture, and the high freights, have made serious inroads in the profits of the producer, though rates have lately assumed a slight upward tendency.

	Supply.	Export.	Stock.
1882	1,816,719	1,957,350	1,362,163
1881	2,924,477	1,883,800	1,910,622

The market for elm opened out very dull, and timber was sold at unprofitable rates, but towards the close of navigation prices improved a little, and to-day are reported firm for next year's delivery. The indications at present seem to augur a light production.

	Supply.	Export.	Stock.
1882	714,649	778,360	530,611
1881	1,027,670	797,160	499,912

Good large white, which is scarce and commands a fair price, while small and inferior wood is neglected. In 1881 the supply was 408,798 against 310,769 in 1882, while the export and stock amounts are shown as follows:—

	Supply.	Export.	Stock.
1882	297,040	312,423	
1881	355,680	210,101	

In birch, the stock is light and difficult to procure in any quantity, while the production for next season's delivery is very uncertain. This table exhibits the state of the market:—

	Supply.	Export.	Stock.
1882	261,920	513,680	78,413
1881	110,483	273,880	51,092

Pine staves have been scarce and in request throughout the season. A considerable advance in prices has taken place, while puncheon staves have also been in fair demand.

	Supply.	Export.	Stock.
1882	385	450	298
1881	1,430	850	1,007
1882	418	430	226
1881	671	602	380

In pine deals the state of the trade is thus epitomized. In the early part of the season there was a very fair demand, but during the summer months there was less enquiry. Towards the autumn, however, a much better feeling prevailed, and this has been maintained up to the present time. The deals wintering, though heavier than last year, should probably reach higher rates than lately current, from the enhanced cost of manufacture, the light stock held in the United Kingdom, and the great demand for sawn lumber of all descriptions for the American markets. The stock wintering in Ottawa is very light.

In spruce deals Messrs. Forsyth report that owing to exceptionally high waters the rivers were entirely cleared of logs, which led to a larger manufacture than in 1881. The mills have no reserve of logs and must depend entirely on this winter's manufacture. There has been a good demand, prices being fairly upheld, and little or no stock remaining in first hands.

THE MONSTER TREES OF CALIFORNIA.

As regards the wonderful size of the Sequoia, that is a matter which does not at first fully come to one. The fact is that all the trees are so large that one fails to realize the magnitude of the giants. It requires a mental education to convince one's self that the transformation is something quite out of the common. It is only when you come to walk in and out of the hollow trees, and to circle around them and take a constitutional by walking alongside of a fallen giant, or perhaps, (if it has done duty as a chimney before it came to grief) by riding up inside the hollow for a considerable distance, that you begin to understand their size. You do so best when, standing on the ground beside a prostrate tree lying buried in a ditch of his own making, you look up at a red wall rising perhaps 15 or 20 feet above your head, bulging outward considerably and extending in a straight line for 300 feet along the ground, and tell yourself that it is only a tree! The owners of the beautiful grove near the hotel have erected tall ladders to enable people to climb on to some of these heights and walk along the fallen trees as if on garden terraces. It sounds cockney, but it is decidedly pleasant to gain a view of the forest from an elevation of 30 feet, and it is not every one who can scale the red rampart without the aid of the ladders. If you choose to clamber along the upturned roots you may

find an airy seat some 40 feet above the ground. This sounds high, but on further consideration you begin to marvel how such extraordinarily small roots can ever have formed a fit pedestal for so ponderous a weight. They have literally no depth and a comparatively small spread, so they have merely a superficial hold on the earth's surface. Yet this slight support has enabled these huge bodies to resist the wild storms of many centuries. All the big trees of the district are concentrated in two groves, namely, the little forest gem of Calaveras, and a much larger belt known as the South Park Grove, on the Stanislaus river, about six miles further. In the Calaveras grove on the Sequoias lie within an area of 60 acres, over which space about 100 lie scattered singly or in groups. Of these 20 attain a circumference of about 80 feet near the base, and one, which is distinguished as 'the Father of the Forest,' is found to measure 110 feet around; it now lies prostrate, and has apparently done so for many a century, for the well-nigh imperishable wood is in part decayed, and long use as a chimney had burned out its inside and destroyed its summit ere it fell. The portion that still remains is like a long mountain, and two large archways have been cut into the side of the said mountain in order that those whose taste lies in that line may ride into the hollow trunk and come out by the further opening. It is estimated that the tree, when perfect, must have been about 450 feet in height. Of the trees now standing four exceed 300 feet in height, and one measures 325. About 25 are said to exceed 250. One can, perhaps, better realize what these mean by finding the amount of house-room to be obtained within a hollowed tree. Several, such as "Minor's camp," and "Pioneer's camp," have been used as temporary houses. In the latter 50 persons can find sitting room; others are used for stabling horses.—G. F. Gordon Cumming in the *Gentleman's Magazine*.

KILN-DRIED LUMBER.

When the question of a dry-kiln or no dry-kiln comes up, the up and dressed lumberman, under certain conditions decides in the affirmative. Often it is for the lumber manufacturer to say whether his money shall lie for months in the board piles, being all that time unable to meet the requirements of the trade, or whether he shall invest in a kiln, and thus be able to turn the cut of his mill into cash at an early day. The interest of the money locked up in several million feet of lumber while it is air seasoning, would in a short time erect a kiln; besides it is a good deal of satisfaction for a business man, who tries to be worthy of the name, to be able to fill orders promptly and satisfactorily. The oaths wafted out upon the breeze by distant dealers who are obliged to pay a great many dollars every year for transporting water, when they ought to pay for carrying lumber only, would make a huge volume if collected. With some manufacturers there is a strong opposition to kiln dried lumber, but the feeling in favor of it is growing. A year or so ago, a firm of Boston builders put up a very fine house finished with hardwoods. It was supposed that the lumber was thoroughly seasoned, but the furnace heat played havoc with the work to such an extent that the owners of the building called upon the contractors to make good their job. To do so was expensive, and they now declare that for the good of their own pockets they will hereafter use no lumber for such finishing that has not been properly passed through the dry-kiln. The lumbermen in the South, who are oftener than otherwise obliged to ship long distances, feel the need of kilns, and it is safe to predict that a great many will be erected south of Mason and Dixon's line within the next year.—*Northwestern Lumberman*.

CROSS-PILED LUMBER.

The *Northwestern Lumberman* says:—The Muskegon mill men cross piled, the latter part of the sawing season, nearly 160,000,000 feet of lumber, or a quarter as much as was cut. It was piled at the mills because the Chicago market would not take it at prices satisfactory to the manufacturers. To-day, an honest count would name 800,000,000 feet as the amount of lumber in the Chicago yards. A good winter's trade will

lessen this large stock materially. With such a trade, the Chicago dealers would want the Muskegon cross piled lumber on, or soon after, the opening of navigation. The Muskegon men have said by their actions, which always speak very plainly, that they will not sell the product of their mills at the prices which ruled during the later fall months. Acting on the same principle, should lumber be no higher next spring, they will then refuse to sell. The Chicago dealers are of the opinion that the Muskegon men may not be able to run their mills for several successive seasons and cross pile the products of them, and the Muskegon men are confident that things will so shape that next spring the Chicago men will take the cross piled lumber at prices satisfactory to the seller, and thus make room on the docks that can be utilized whenever there may come another depression. There is more than one man in Chicago who is interested in these different phases of the question, and the same may be said of at least one man in Muskegon. Time will decide them. It is impossible to tell which way a cat will jump until the bag is untied.

VALUE OF HEMLOCK.

The *Northwestern Lumberman* says:—Hemlock, that has been considered the offal of the forests, is gradually asserting its rights. In the East, where it has been used all along, it is increasing in value, builders appreciating the fact, more than ever, that in many instances it can be used in place of pine; and the cost of it is much less than pine. The hemlock timber of Michigan and Wisconsin has been looked upon as almost worthless property, but the men who own it are disabusing their minds of that idea, and are alive to the fact that not many years hence it will figure as a valuable wood. They are not so ready to give it away as they were even two years ago. There is probably hemlock enough in Michigan to supply the mills of the Northwest with their yearly stock of logs for five years, and in due time every tree that will produce merchantable lumber will be wanted. Long before the exhaustion of pine it will be learned that hemlock has been unjustly despised, and when the end of the pine shall be near at hand hemlock lumber will sandwich in admirably.

Tapping the Timber.

A railroad company has recently been organized in Wisconsin to construct the Wisconsin, Pittsfield & Superior railroad from Remington to Dexterville, in Wood county. It is understood that the road is to be built in the interest of the Chicago, Milwaukee & St. Paul road, to form a part of that system when completed. The line will at present extend no farther than the northern part of Wood county, notwithstanding its Superior name. The main purpose of the line is to tap a section covered with valuable timber.

Rough Siege Laid to Him.

Mr. James O. Neville, the well known General Import and Export Agent of the "Allen Line," and General Dominion Shipping Agent, of 538 Dorchester street, Montreal, is an active member of the Shamrock La Crose Club. "While on a late exhibition trip to the States," said Mr. Neville to the writer "my old foe, the rheumatism, attacked me, and gave me a rough siege. I suffered with the ailment all through my trip and long after my return home. I tried several remedies and found them entirely useless. Having read the endorsements of well known people who had used St. Jacobs Oil, and been cured thereby, I determined to give it a trial. Upon the first application, I saw at once it was what I required. In two weeks time I was as well as ever, and fully able to attend to my business. I have not had the least suggestion of rheumatism since. It certainly is a remarkable remedy and one that seems to me to be infallible."

A CURE FOR CHOLERA.—There is no better remedy for Cholera than Hagyard's Yellow Oil taken internally and applied according to special directions, this is the great household panacea for Rheumatism, Stiff Joints, Pain, Inflammation, &c.

W. T. BRAY, Pharmacist, Wingham, Ont., writes that the sale of Burdock Blood Bitters have very largely increased in that locality, and adds that he hears very favorable opinions expressed regarding it, and if time permitted could send many names of benefited parties, &c.

Chips.

NEARLY 1,000 men are at work in the Adirondack wilderness this winter in the employ of two firms.

ANON & BUCK have nearly completed a chemical pulp mill, at Angus, Que., 16 miles from Sherbrooke on St. Francis river.

THE Duluth Lumber Company has begun the erection of a large dry-kiln. It will cost \$18,000, and have a capacity of drying 60,000 feet of lumber a day.

AN immense amount of cedar shingles will be cut this winter in Aroostook, Me., if present prices hold. Cedar swamps are good property in that county now.

A citizen of Kaukauna, Wis., in digging a well, found embedded in the hard clay, 24 inches deep, several pine cones, in as perfect shape as if direct from the tree.

THE electric light system at Utsalady, W. T., which is employed at the mills for vessels loading, makes day of the darkest night, and can be seen from the heights nine miles distant.

AN unusually large number of big sticks were lately brought over the Olympia & Tonino railroad, W. T., which ran from 100 to 104 feet in length, and measured from 3,000 to 5,000 feet. The road takes regularly about 800,000 feet monthly to tide water from a single camp.

FLSTONER BROTHERS, of Minn., have purchased of W. C. Sargent considerable cedar stumpage on the south shore, near Duluth, and will erect a mill, and establish "ices and yards at Squaw Bay. There is reported an increase of activity in the cedar business in the Duluth district.

THE *Timber Trades Journal* says:—The falling away of the Baltic log trade is said to have been very marked this year. A great deal of pond space, formerly employed for the storing away of Baltic logs, is reported to be now vacant. The tendency of the trade of to-day is certainly in the direction of sawn in preference to hewn wood.

THE carpenters of the Northern Pacific railroad are building woodsheds in Idaho in order to have sufficient dry wood for the locomotives. The shed at Sand Point is 200 feet long by 75 feet wide and those at Camp Hope, Cabines, Gravel Pitt 3, Rock Island, Trout and Beaver creeks are 20 to 120 feet. The wood to fill these sheds is already cut.

THE Northwestern Lumber Company at Hayward, in this county, is putting in the machinery at its new mill, which will comprise two gangs, two circulars, two trimmers, detachable haulup chain, log rollers, and other approved appointments. It is calculated that the mill will saw 200,000 feet daily, and the company proposes to bank 40,000,000 feet of logs this winter.—*Ashland Press*.

THE *Northwestern Lumberman* says:—The manufacturer who will grumble at the profits of this year's business would certainly complain if he were going to be hung with a silken rope. There has little stood in the way of money-making by the saw mill man. If he has not made his business pay, it was because he either conducted it very loosely, or thought that about all the standing pine was gone, and paid more for his stock than he ought to.

THE *Northwestern Lumberman* says:—Figures representing the cut of 1882, so far as collected, show that the aggregate for the season will be much larger than ever before. There has been no serious hindrance in any district, except at Muskegon, Mich., where the strike put operations back to quite an extent. In the Saginaw and northwestern districts the work of turning out lumber went on smoothly, there being no disturbance among the employes, and no damage from high water.

It is stated that it is not at all improbable that the Michigan Central Railroad Company will build a railroad from the Mackinaw division to Thunder bay. An engineer of the company has been making preliminary surveys from Beaver lake and Piper, extending into Oscoda county, and is now making a survey from Alpena to connect with the Mackinaw division at Beaver lake, via Piper. These lines would open up a wide section of timber country to railroad communication.

LATER estimates place the amount of lumber burned in the fire that destroyed the Saginaw barrel works at 1,700,000 feet, a considerable portion of which was hardwood.

ADVICE from Maine lumbermen go to show that operations this season in that state fully equal those of last winter. Though, owing to the burning of the mills at Fairfield, 10,000,000 feet of logs are left over, there will be no shrinkage in the coming log crop below that of last season. Lawrence, Phillips & Co., at the Somerset mills, have about a year's stock on hand for their mills there, and will cut 7,000,000 feet of logs. The total log crop of the operators at Fairchild will not fall much short of 40,000,000 feet.

THE lumber interests of Nashville, Tenn., during the last decade have increased about five hundred per cent. In 1870 there were but three saw mills and six planing mills. Now there are within the consolidated limits of the city, 13 saw mills, 12 planing mills and 33 firms engaged in the lumber trade. Previous to the civil war the amount of lumber handled in this city did not exceed 5,000,000 feet annually. Last year the city mills cut 60,000,000 feet of walnut, ash, poplar and pine, much of the finer grades of which was shipped to the north and west and exported to European markets; while there was received by river and rail not less than 35,000,000 feet additional.

Consumption Cured.

An old physician, retired from active practice having had placed in his hands by an East Indiana dilettant the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung affections, also a positive and radical cure for General Debility and all nervous complaints, after having thoroughly tested its wonderful curative powers in thousands of cases, feels it his duty to make it known to his fellows. The recipe, with full particulars, directions for preparation and use, and all necessary advice and instructions for successful treatment at your own home, will be received by you by return mail, free of charge, by addressing with stamp or stamped self addressed envelope to

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KEEP it in your family. The best remedy for accidents and emergencies, for Burns, Scalds, Bruises, Soreness, Sore Throat, Croup, Rheumatism, Chills, and Pain or Soreness of all kinds, is that marvellous healing remedy, Haggard's Yellow Oil.

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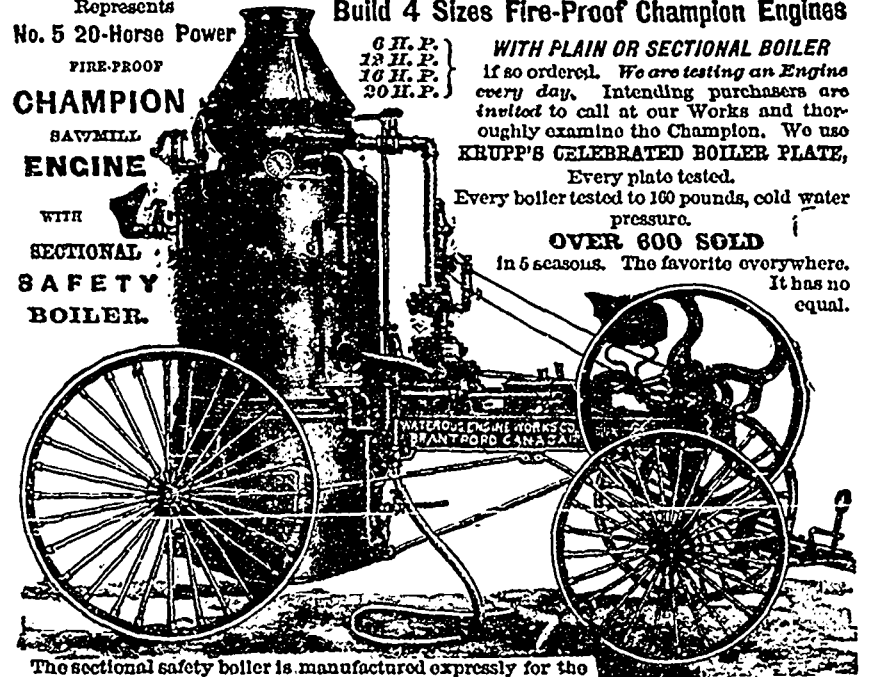
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ADDRESS WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

Send for New Circular.

Market Reports.

TORONTO.

From Our Own Correspondent.

Dec. 22.—The steady spell of wintry weather combined with the near approach of the holiday season has had the effect of bringing building to a stop, and a state of quietude reigns at all the retail yards, and but few cars of lumber are coming in on any of the railroads, and as there is but little to record in connection with the trade at the present time it may not be unwise to give you a few figures about the season's sales and shipments at this place, which may, I think, be relied upon as being as nearly accurate as it is possible to get at it. Having taken the trouble to call at the different yards throughout the city and having been kindly assisted by each of the dealers in arriving at correct estimates, I am thus enabled to give correct figures, as to the past years business, and I venture to say that the showing is quite a respectable one more especially as regards the city's consumption.

We have exported during the year as follows: AMERICAN MARKETS.

Table with 2 columns: Item (Lumber, Shingles, Lath) and Quantity (e.g., 52,000,000 feet).

TO CANADIAN PORTS.

Table with 2 columns: Item (Lumber, Shingles, Lath) and Quantity (e.g., 6,000,000 feet).

SOLD BY RETAILERS DURING THE YEAR.

Table with 2 columns: Item (Lumber, Shingles, Lath) and Quantity (e.g., 45,000,000 feet).

SOLD DIRECT TO CONSUMERS BY WHOLESALE MEN.

Table with 2 columns: Item (Lumber, Shingles, Lath) and Quantity (e.g., 27,000,000 feet).

And to the above may be added as shipped by car load by middlemen to points east and west, principally the latter—

Table with 2 columns: Item (Lumber, Shingles, Lath) and Quantity (e.g., 3,000,000 feet).

Thus making a total handled here this season of:—

Table with 2 columns: Item (Lumber, Shingles, Lath) and Quantity (e.g., 133,000,000 feet).

This would represent a money value of something like 2 1/2 millions of dollars and then it must be borne in mind that fully one third more lumber than above represented has been handled by Toronto wholesale dealers and shipped direct from the mills to the west and also to Winnipeg; and another favorable feature of the past season's trade by retailers, is, there have been less bad debts.

QUOTATIONS, FROM YARDS.

Table with 2 columns: Item (Mill cull boards, Shipping cull boards, Scantling and joist) and Price (e.g., \$10 00).

Table with 2 columns: Item (Cutting up planks to dry, Boards, Sound dressing stocks) and Price (e.g., 24 00).

B. M.

Table with 2 columns: Item (1 1/2-inch flooring, 1 1/2-inch rough, 1 1/2-inch dressed) and Price (e.g., 32 00).

MONTREAL.

From Our Own Correspondent.

Dec. 25.—Trade in lumber is pretty slow just now and entirely confined to the supply of retail wants, which have been small but considered fair for the season. Dealers are busy stock taking to see what the result of last year's operations proves to be. Laths are still in demand at the high price, and other quotations are firm and unchanged. There is nothing as yet worth reporting from the woods; there has

been plenty of snow which should enable the lumbermen to get out a large quantity of logs. The manufacturers of hardwood in the townships are hard at work and no doubt the supply will be ample next season. We quote prices in the yards as under—

Table with 2 columns: Item (Pine, 1st quality, Spruce, Hemlock) and Price (e.g., \$35 00).

LIVERPOOL MARKETS.

The latest mail advices report the consumptive demand for western goods as being fairly satisfactory with a further decline in spruce deals. Several cargoes of St. John, N. B., spruce deals were placed at £8 to £7 15s, by private sale, and by auction an average of £7 16s. 7d. was obtained. Wholesale quotations are for Quebec square white pine 1s. 7d. to 2s. 5d. per cubic foot, Quebec waxy board pine 2s. 3d. to 2s. 8d. per cubic foot; 1st quality Quebec pine £21 to £22 per standard; 2nd quality Quebec pine £15 to £16 per standard; 3rd quality Quebec pine £9 10s. to £10 per standard; St. John, N. B., spruce £7 15s. per standard.

CORDWOOD.

Prices are unchanged and there has been a pretty fair demand for maple which is reported as going out well during the past week. Imports are still meagre and until the country roads are a little better for heavy loads not much is looked for. We quote ex cartage at the depot:—

Table with 2 columns: Item (Long Maple, Short, Long Birch) and Price (e.g., \$7 50).

OSWEGO, N. Y.

From Our Own Correspondent.

We send you corrected quotations to date. Trade has been very dull for past four weeks—stocks are about as large as usual; the assortment is good; dealers are expecting a brisk trade after the New Year's festivities are over. Laths are scarce, the stock of shingles is very much in excess and prices are very weak at our quotations. The receipts at this port for the two past seasons have been for 1882 213,000,000 feet, for 1881 169,000,000 ft.

Table with 2 columns: Item (Three uppers, Pick'ngs, Fine, common) and Price (e.g., \$46 00).

CHICAGO.

The Northwestern Lumberman of Dec. 21, says—A December quietude brooks over the lumber trade of the entire country. The year is drawing to a close, and lumber dealers are getting ready to underscore a twelve-months' operations.

Last year the December spot supply of about 600,000,000 was not considered excessive by the wisest dealers here, and their opinion was borne out by the after results. The February and March sales reduced the yard stocks so low in assortment that the spring opened with hardly enough to supply the rather sluggish trade that followed in April and May. Circumstances may possibly produce a like condition next spring, though that is hardly to be expected, since the markets everywhere are better supplied than they were last year at the season's close. Hence, while it must be admitted that the surplus this year is greater than it was last, and the prospects of trade are yet in doubt, the excess of supply need not necessarily mean a

heavy decline of prices in the spring. The combination of weather and roads, and the prices of farm products, will, more than the amount of stock on hand, determine the demand for lumber during the nine coming months, as well as the prices that will prevail.

Receipts, and stock on hand, of lumber, shingles, etc. for the week ending Dec., 21, as reported by the Lumberman's Exchange:

Table with 2 columns: Item (1882, 1881) and Quantity (e.g., 3,449,000).

ALBANY.

Quotations at the yards are as follows:—

Table with 2 columns: Item (Pine, clear, Pine, fourths) and Price (e.g., \$57 00).

BOSTON.

Cotton Wool and Iron of Dec. 23, says:—General trade is seasonably quiet. The protracted cold weather has in the main put an end to nearly all outside and now operations for the season. The tone of the market is quiet and steady, with a moderate amount of new business offering in a conservative way. Advices from the country are quite favorable to logging operations so far, although it is yet too early to safely predict the final outcome of the season's work.

CANADA PINE.

Table with 2 columns: Item (Selects, Dressed, Shipping, Dressed, 1st) and Price (e.g., \$45 00).

BUFFALO.

We quote cargo lots:—

Table with 2 columns: Item (Uppers, Common, Culls) and Price (e.g., \$46 00).

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Table with 2 columns: Item (Three uppers, Common, Culls) and Price (e.g., \$45 00).

BRISTOL.

The Timber Trades Journal of Dec. 9, says:—Messrs King Brothers' December circular says:—There has been but a poor demand for timber of all descriptions during the past month, and the only noticeable feature is a falling off in the importation, reducing the excess of this year's tonnage over last very materially. Quebec goods.—The importation of all classes

of these goods has been extremely limited, owing to the great difficulty in obtaining ship room. Yellow pine timber—There have been inquiries for both common and waxy board timber. Birch, ash and elm, with the exception of the former, have been selling freely. There has been no arrival of walnut. Deals do not attract much attention, except those extra dimensions. Staves are in fair request. Now Brunswick goods.—Spruce deals—There does not appear to be any demand at present for these goods. Prices are unchanged. Stocks are not excessive. Pine deals—No arrivals. Birch is quiet. Mome, Dantzie, &c., goods.—Fir timber—There has been an inquiry for this article, but stocks appear exhausted. Wainscot logs have sold somewhat freely at fair prices. Oak logs—We do not hear of any transactions. Staves are in but little request.

The arrivals for the past month consists of 3 vessels from Quebec, 2,722 tons; 2 from Nova Scotia, 823 tons, and 2 from Finland, 604 tons; together, 7 vessels, 4,151 tons register; against 18 vessels, 10,090 tons register, for the corresponding month last year, showing a decrease of 5,939 tons register. For the season commencing February 1st, 1882, to the present time, there have arrived 149 vessels, 73,561 tons register, against 116 vessels, 64,700 tons register, for the same period last year, showing an increase of 8,852 tons register.

GLASGOW.

The Timber Trades Journal of Dec. 9, says: There has been only a trifling addition of American woods to the stocks in Clyde ports during last week, and the little after this date which may drop in will not affect the general market. On the whole there is a fair supply on hand of the various descriptions: Of birch timber there have been no fall cargoes of lower port wood, and the market is open for such. At present there is a good demand for American walnut, teak, and mahogany, and very fair prices are obtained.

Prices fluctuate in Glasgow as well as elsewhere, but that they are so good at this time of year and under circumstances less favorable to trade than they have been must be very reassuring to those who are apprehensive that the stocks of foreign timber are too heavy in this country to justify the expectation that prices can be kept at their present currency. If European prices give way, it is thought those of British America must come down also, but when we see Quebec 1st quality pine fetching £10 to £12 per standard more than the choicest Archangel deals, it is evident that for certain purposes of panelling, and other joinery, there is no competition between American and European pine. The former will be had if the buyer has to pay 50 per cent. more for it.

LIVERPOOL.

The Timber Trades Journal Dec. 9, says.—The diminution of business which usually makes itself felt as the end of the year approaches has begun to manifest itself, and although there has been a fair amount of timber, deals, &c., taken from the market recently, yet the decrease as compared with that of last month is large in the aggregate, but compared with that of last year there is no great difference, as it amounts only to about 37,000 cubic feet. A comparison of the figures in the following stock list will show the position held by the various items at this period last year and the present time.

Spruce deals have come forward faster than was required, and as cargoes continue to be stored on account of the shippers, the stock has accumulated, but has not yet reached the quantity held last year at this time. At the same time, as cargoes have in some cases been forced from the quay, prices have given way. The import of flooring has also been slightly beyond the demand, and the stock on hand is now sufficient for the winter months.

LONDON.

The Timber Trades Journal of Dec. 9, says: There is but little doing in the timber trade just now, that is, in the buying and selling departments outside of the saleroom. If you talk to a f. o. b. seller about next season's prices, he is ready to discuss probabilities with you,

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but, unless you are prepared to make him an offer, he is rather shy of quoting a price. He can give you abundance of reasons why the markets ought to be firm, and thinks importers are very wrong to let their goods go so cheap when, if only they would stand out for a good profit, they would be sure to get it. Turn to a buyer, and you find yourself very little the wiser afterwards. He is in no hurry, and is going to wait and see which way the cat jumps before he enters into new engagements. He tells you it is difficult to do any good by importing at the prices demanded on the other side, and he thinks they must come down rather considerably to induce extensive business; and looking at the stocks in Northern Europe, and the plentiful supply on this side, it seems to him that they want more customers in this country than they are likely to find for some time to come. If you suggest that the continent of Southern Europe will come to the rescue, as great works are being undertaken in France and the Low Countries, and that even Spain is greatly increasing her transactions with Sweden, he tells you that he has heard that argument many times before, but that there was always plenty left for this country, which generally came forward quite as fast as it was wanted, and frequently much faster.

THE BLOW-OFF.

One of the most important parts of a steam boiler is the blow-off. It is also one that is subject to more abuse in its construction, location, and use than almost any other fixture pertaining to the boiler. The most peculiar ideas seem to prevail in regard to its construction and position on the boiler. Some put it at the front end, some at the back end, and some put it in the middle of the shell. The great majority also, instead of putting it on the bottom of the shell, where it belongs, insert it through the heads of the boiler, anywhere from two to six inches above the bottom of the shell, thus rendering it impossible to entirely empty the boiler when desired, and greatly impairing its efficiency for any purpose.

The only place for a blow-off pipe to enter a horizontal externally-fired boiler is through the bottom of the shell within a foot or so of the back head. The boiler should be set slightly lower at the back end than at the front, say three-fourths of an inch for a boiler fifteen feet long. Then it may be entirely emptied by simply opening the blow-off valve, and all syphoning of water out through and hole is obviated.

This, however, is not the most important reason for locating the blow-off at the back end of the boiler. In a horizontal externally-fired boiler the application of the heat, and the resulting circulation of the water, is such that the sediment is always deposited at the back end to a much greater extent than in any other part of the boiler. Obviously, then, this is the place for the blow-off. It is true that most boiler makers now place it there, but there are many who still persist in placing it at the front end.

The proper method of constructing and attaching the blow-off pipe to the ordinary horizontal boiler is as follows: First, the pipe should be two inches in diameter. A circular piece of boiler plate about eight inches in diameter should be riveted on the bottom of the shell, with its center not over twelve inches from the back head. The hole for the pipe had better not be made until after this piece is riveted on, and then it should be drilled. If, however, facilities are not available for doing the job in this way, it may be drilled before it is put on. The hole should then be tapped, when it is ready for the pipe. The rivet holes on the inside of the shell should always be countersunk, and the heads of the rivets driven flush with the inner surface of the plate. If this is done there are no projecting rivet heads to assist in the collection of sediment at this point. A blow-off attached in this manner and provided with a straight away valve outside the setting will always give perfect satisfaction if properly cared for. In many cases, however, where the water is bad, they are not opened often enough, and the inevitable consequence is that they soon become filled up with scale and sediment. When this occurs it may always be

regarded as the best possible proof that it is located in just the right place, and, if properly attended to, will prove most effective in keeping the boiler free from scale and sediment.—*The Locomotive.*

LONDON STOCKS.

The Timber Trades Journal of Dec. 9, says: The dock deliveries continue to improve, but they are only "furling slowly ahead" of those of the same date last year. There is a clear gain of about 120 standards this week, at which rate of recovery it would take more than two years to bring them parallel with the deliveries of 1881 from the same docks. These indices of trade seem inconsistent not only with the excess of importation as signified by the Board of Trade returns, but also with the reputed activity of the building trade in and about London. But facts put into figures are hard things to get over.

If there were a short supply in the docks the puzzle would disappear, but it happens that of the most marketable goods there is an unusually good supply. In Baltic deals and battens there are still about 1,300,000 pieces more than last year at the end of November, of British American there are fewer, both in pine and spruce, but the difference is not above 150,000, or about one-eighth part of the excess from European ports. In flooring and boards generally there are now only about 500,000 pieces more than last year, a mere bagatelle, when we recall that earlier in the year the difference was counted in millions. There was, however, at this period in 1881 a much larger quantity landed, but not taken into stock, than there is now, and the next dock returns will probably show a nearer approach to equality in the two seasons.

FUGET SOUND LUMBERING.

TACOMA, W. T., Dec. 15.—The winter operations on the Sound will be much heavier than on any previous season, it being universally conceded that next year's demand will be greater than on any previous year of the lumber industry on the Sound, and prices will likely rule as high as in 1882. The local demand, already very large, will no doubt increase 25 per cent. There is now great activity among the loggers. New roads are being cut, new camps established, land secured, etc. A general movement toward back lands is observed, the margined lands having been cleared of their best timber. As a result considerable railroad building will follow during the coming year. The fact of this enforced retreat into the heart of the great forests, the necessary construction of logging roads, the purchase of heavy tracts of timber, and generally increased expense, makes it apparent that larger capital will henceforth be needed in the same ratio that operations are extended. There are already several large concerns operating on the Sound, but the time is not far distant when the interests of this region will equal those of the great North, and receive the attention of such representative men and concerns as Tom Nester, the American Lumber Company, the Diamond Match Company, and the like

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White and Yellow Pine Lumber and Timber.

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Where, 10 years ago, 15 men constituted a big camp force, 30 to '60 are now frequently employed.—*Northwestern Lumberman.*

STOCKS AT LIVERPOOL.

The Timber Trades Journal says:—Judging from the quantity of timber, deals, and other wood goods lying at the various wharves and railway docks for shipment to the country, there would appear to be a good consumption going on, and when the statistics for the month are made up it is not at all improbable that the figures will be found to be larger than is at present thought. Although the import of spruce has been much beyond the anticipations of those most interested, comparatively little has gone into stock, although in some cases importers have stored their cargoes rather than yield to any further concessions in price, as the late sales have been made on terms which must have left shippers with heavy losses to face, as buyers recently have had all the best of the market. Reports from the shipping districts all point to a curtailment of supplies from these ports which are in no danger of being frozen up, but, on the other hand, there will doubtless be an amount of anxiety to press forward goods from the northern ports whilst the opportunity affords, rather than have them wintering over.

Lumberman's Farm.

Wells, Stone & Co., who lumber in Roscommon, Gladwin and Clare counties, Mich., have a fine farm of 1,000 acres in Gladwin county, of which 600 acres were under cultivation during the past season. The crop comprised 500 bushels of wheat, 4,000 bushels of oats, 250 tons of hay, 1,000 bushels of potatoes, 5,500 heads of cabbage, 19 barrels of pickles, 3,000 bushels of turnips, 300 bushels of onions, 250 bushels of

beets, and other things usually grown on a farm. All this stuff is used in the firm's camps.—*Northwestern Lumberman.*

Tenons.

A single tenon is, theoretically, stronger than a double one, and its mortise also weakens the timber in which it is framed less than 2 mortises would. Practically a double tenon would be used with a joint bolt for drawing the framing together, placed between the two tenons; or it might be advisable to use two tenons to diminish the effect of shrinkage, as, for instance, in a door, where a double tenon often answers better than a single one.

The Toronto Canadian Manufacturer says:—At a meeting of representatives of insurance companies, held on the 5th Dec., an advance was made on rates for insuring lumber in any part of Ontario and Quebec, the cities of Montreal, Toronto, and London only excepted.

In common with the general cry, the preparations for logging on the Wisconsin river are the greatest ever known, 140,000,000 feet of logs being already contracted for, to be put into the main river and its tributaries, north of Merrill, while at least 40,000,000 feet more, not under contract or to go on the market, may be calculated on.

The Emerson International says:—Carney & Watson are having loaded at the station ten car-loads of lumber destined for Regina, where it will compose part of a large stock of lumber and building material in a new lumber yard to be opened at that place by Messrs. G. F. Baldwin and L. R. Schaffner of this place. Mr. Baldwin expects to leave for Regina next week.

GLASS FOR BUILDING.

The Chicago *Northwestern Lumberman* says—
 "The *Lumberman* is rather proud that it was the first to name glass as a building material. It saw in the future—and not in the far future either—buildings the sides of which were constructed of glass instead of brick, stone or wood. Some of its contemporaries were inclined to make light of the idea; but the man who leads the way is sometimes reviled. A remarkable instance of the kind occurred a great many years ago. A representative of one of the leading dailies of Chicago has been interviewing the architects of the city, and among the reports is the following:

"A prominent firm of architects, who have the reputation of holding conservative views, are inclined to think that in the near future glass is to enter much more extensively into building material than ever before. The firm states that, owing to improvements in manufacture, glass can be manufactured in blocks, columns, capitals, friezes, etc., of any size and of any design which the most diverse tastes can conceive of, and that it is capable of sustaining a greater weight than any other substance, even granite, which is composed largely of quartz crystals. Annealed glass columns, for instance, could be introduced for entrances, supports, etc., without very much expense over and above unannealed glass, the process requiring only extra care and more time in cooling. It is very possible to build entirely of glass blocks. The material is smooth, clean, and handsomer than any other, and will not intercept the sun's rays, so that it would give a saving in fuel, and, being impervious to atmospheric changes, would be practically everlasting. It would require no laths, plaster, or paint, and would not retain impurities from the atmosphere, which would seem to make it desirable from a sanitary point of view. It could be made in any color, could be transparent, clouded, or opaque, and moulded into any desired shape."

These opinions coincide exactly with what the *Lumberman* has said on the subject, and it congratulates the architects, although they are a little late, that they are on the right track. The following table will be of interest as showing the average crushing weight per square foot of the different building material now in use, also of glass, one of the coming materials. It will be seen that glass will bear three times the weight of granite:

Glass.....	7088.
Granite.....	1,800
Basalt.....	600
Building sandstone.....	700
Red sandstone (New York and New Jersey)....	300
Brick.....	250
Ordinary brickwork.....	175
Good brickwork laid in cement.....	25
Brickwork, first-rate.....	35
Slate.....	60
Concrete (1 part lime and three parts gravel)....	30 to 50

THE STINGING TREES OF AUSTRALIA.

The stinging plants of Queensland, Australia, belong to the natural order Urticaceae, and represent two genera, *Urtica* and *Laportea*. Of the first named genus there are two species in Queensland, both herbaceous plants:

1. *Urtica incisa*, found chiefly on the Fitzroy River, and said by M. Thozet, of Rockhampton, to grow in great profusion.

2. *Urtica urens*, a common weed in this country—the nettle—and found in the neighborhood of dwellings in Queensland.

In the genus *Laportea*, on the other hand, there are three great stinging trees:

1. *Laportea piperis*, a large tree, often attaining a height of 100 feet or more. The wood is soft, fibrous, and juicy, and the bark smooth and ash colored. The base of the tree is supported by prominent angles or buttresses. The leaves are from 1 foot to 1 foot six inches long, and nearly as broad, smooth above and sprinkled with a few stinging hairs, but more or less covered with short, soft hairs underneath. It is found chiefly in South Queensland. The sting is severe, but not so bad as that of *L. moroides*.

2. *Laportea photiniphylla*.—A fine tree, from 60 to 70 feet in height, with a straight stem. The wood is soft, and the leaves are almost elliptical in shape, nearly smooth and sprinkled with a few stinging hairs. It is found in the More-

ton Bay district, and also in North Queensland. M. Thozet mentions having found it on the Fitzroy River.

Laportea moroides.—A small tree, with most virulent stinging hairs. The leaves which are about 9 inches long, are covered with short soft hairs on both sides. The fruit is of a beautiful purple color, succulent, and densely clustered. This tree is found chiefly in the Kennedy district in North Queensland. Mr. Fitzalan, of Bowen, mentions that it is common about Port Denison and Edgecumbe Bay.

These stinging trees, which Bentham and Von Mueller place in the genus *Laportea*, are by many botanists included under *Urtica*.

Of all the stinging plants of Queensland, *Laportea moroides* surpasses the others, both in the severity of the pain produced at the time and in the duration of its effect.

Woods for Pulp.

Wood pulp, which is made into paper, and molded into barrels, casks, pails and other woodware, boxes, cornices, picture frames and a variety of small articles, can now be made from many other woods than poplar, which has long held the preference in such manufacture. Buckeye has a white fiber, and can be used, while spruce, pine, chestnut, basswood, fir, hemlock, cedar, cottonwood and other kinds of wood have been found suitable for making into various kinds of paper. Only the non-resinous woods are adaptable for white paper, while the resinous woods serve well for colored paper. Machines have been built which turn out pulp with equal facilities from all kinds of wood, different stones being required for different woods however. The longest fiber is made from willow basswood and poplar ranking next respectively, in that regard. Cedar, fir and hemlock are said to grind about alike, the latter working a little more freely. Maple has a fiber shorter than that of either spruce or pine, and is quite hard to grind. Birch is comparatively hard, and grinds very short. Poplar and buckeye pulp remain white for a considerable time; other woods changing color. Birch becoming pink, maple turns purple and basswood takes on a reddish hue. It is estimated that over 200 tons of wood pulp are daily turned out in the United States.—*Northwestern Lumberman*.

Work in the Woods.

In their operations on the Trent, Muira Salmon and Napanoe Rivers and their tributaries, Rathbun & Son employ in the vicinity of 900 men. The season thus far has been very favorable for lumbering operations, as the weather has been very pleasant and the snow fall sufficient to enable hauling to be done quiet readily. Already the firm has 150,000 pieces of pine cut and skidded, in addition to cedar ties, pickets, and telegraph posts. At first it was the intention to make the cut for this winter as extensive as possible, but the chances are, judging from present indications, that the work in the woods will, to a certain extent, be curtailed, as the prominent lumbermen of the district, after consultation, have decided to limit their production for next year. Rathbun & Son have gone into the tie trade very extensively. They have a contract to supply the G.T.R. between Montreal and Sarnia; they are expected to fill all the wants of the Quebec & Ontario Railway, with the exception of the portion between Peterborough and the Trent River; they supply the Midland, and have contracts for furnishing three roads in New York State with these rail supporting requirements. The firm's business this winter, will therefore, be quite extensive.—*Bellefleur Intelligencer*.

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FIRE IN THE WOODS—DON'T START ONE.

A friend of ours once had a startling experience in a clearing on the southern shore of Lake Superior. Sitting on a large log, twenty feet long, he thoughtlessly held the lighted end of a cigar upon the half rotten surface, and went away without noticing the effect. The next day at the same hour, passing by the spot, he was astonished to find the huge trunk nearly consumed, and all glowing with an intense heat. The fire had silently eaten its way through and through the log, and nothing but its chance isolation prevented a disastrous forest fire, which might have laid waste half a dozen counties and destroyed a thousand homes.

Everyone who goes into the woods—every hunter, chopper, logger, picnic party, rambler, botanist, should bear in mind that a spark may cause a conflagration, as ruinous as that which occurred in Michigan last year.

The forests of the United States still yield annually four hundred and fifty million dollars' worth of merchandise, and furnish employment to one million persons. This is the least of their usefulness to us. They prevent the too rapid evaporation of the rain; they retard the melting of the snow, thus preventing destructive floods, garnering up the water for safe and gradual use, and keeping the mountain springs over full and fresh. Let us unite in guarding this precious inheritance.—*N. Y. Ledger*.

The Digestibility of Oysters.

Why oysters should be eaten raw is explained by Dr. William Roberts in his lecture "Digestion." He says that the general practice of eating the oysters raw is evidence that the popular judgment upon matters of diet is usually trustworthy. The fawn colored mass, which is the delicious portion of the fish, is its liver, and is simply a mass of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment—the heptide diastase. The mere crushing of the oyster between the teeth brings these two bodies together, and the glycogen is at once digested without any other help than the diastase. The raw, or merely warmed, oyster is self-digestive. But the advantage of this provision is wholly lost by cooking; for the heat immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.

"My dear sir, do you want to ruin your digestion?" asked Professor Houghton of Trinity College one day of a friend who had ordered brandy and water with his oysters in a Dublin restaurant.

Then he sent for a glass of brandy and a glass of Guinness's XX, and put an oyster in each. In a very short time there lay in the bottom of the glass of brandy a tough, leathery substance resembling the finger of a kid glove, while in the porter there was hardly a trace of the oyster to be found.

REST

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The Way They Do It.

A correspondent of the Grank Fork Plain-dealer attempts to elucidate the method pursued by the alleged pine rings of Minnesota to squeeze out rival bidders at an auction sale of standing pine:

"The only way to bid safely at a pine land sale is to procure estimates, which will cost \$10 and upwards per 40 acres. When the day of sale arrives—which may or may not be put off from time to time if too many bidders are on hand (this has been done in the past before)—the bidding commences. This ring, that is in possession of estimates covering all the land to be offered, appoints one or more men to bid for it. This ring may, and probably will, embrace capital to the extent of \$5,000,000. If no opposition is made the land is bid off at from \$1.25 to \$2 per acre; but if opposed by a bidder the lands are run up and unloaded on the outsider at a high price, or they are bid out of his reach. Thus one of his estimates is disposed of; and so on until his list is exhausted. As soon as bidders are out of the way the price drops to \$1.25 or \$2, the latter being the highest price the government has ever secured at former sales. After the sale is closed the excess paid to drive off outsiders is divided *pro rata* over all the lands purchased by the ring. Under this system the individual is contending against amassed capital, with the usual result."

The Men for the Woods.

The *Northwestern Lumberman* says:—Every man does not stop to think how the lumber industry would be crippled if immigration to our country were to stop. If loggers and saw mill operators were to hang out the sign, "No foreigners need apply," all instead of few of the families who settle in the new West would be obliged to live in dug-outs. American boys can keep cooks, go to college, and live off the old man, but not many of them are inclined to pile lumber or endure the rigor of camp life. It would be a sight worth witnessing to see them lay off their silk suspenders and swing the axe or pull the cross-cut. They look upon the foreigners in flannel shirts and big boots who seek the jobbers as very ordinary cattle; but these same foreign gentlemen are prepared without special training to go into the woods and make themselves useful to the world. Their muscle is equal to the task of swinging a four pound axe from daylight to dark, and it is fortunate that a sweat in a foreign tongue makes the mule as lively as though it were hurled at him in the purest English.

A California Tree.

There was recently felled in Sonoma County, California, a tree which cut up as follows. The *Petaluma Argus* says that the details can be relied upon. The standing height of the tree was 347 feet, and its diameter near the ground 14 feet. In falling, the top was broken off 200 feet distant from the stump, and up to the point of breaking the tree was perfectly sound. From the tree saw-logs were cut of the following lengths and diameters: 1st, 14 feet long, 9 feet diameter; 2d, 12 feet long, 8 feet diameter; 3d, 12 feet long, 7 feet 7 inches diameter; 4th, 14 feet long, 7 feet 7 inches diameter; 5th, 16 feet long, 7 feet diameter; 6th, 16 feet long, 7 feet 10 inches diameter; 7th, 16 feet long, 6 feet 6 inches diameter; 8th, 16 feet long, 6 feet 4 inches diameter; 9th, 16 feet long, 6 feet 3 inches diameter; 10th, 18 feet long, 6 feet diameter; 11th, 12 feet long, 5 feet 10 inches diameter; 12th, 18 feet long, 5 feet 6 inches diameter. It will thus be seen that 180 feet of this remarkable tree was converted into saw logs.

JAMES VICK.—From the appearance of *Vick's Floral Guide*, which is on our desk, we should judge that the young Vicks are "chips of the old block," as the *Floral Guide* with its lithographed cover is handsome enough for the parlor table. It is printed on the best of paper, has three colored plates of Flowers and Vegetables, and full of useful information. Those who send 10 cents for it cannot be disappointed, as the plates alone are worth the amount. Address, as in past years, JAMES VICK, Rochester, N. Y.

J. L. Goodhue & Son

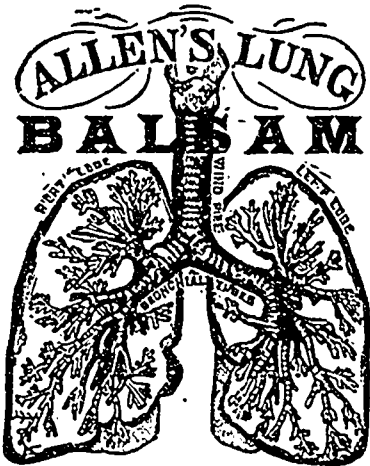
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(This Engraving represents the Lungs in a healthy state.)

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TAKEN INTERNALLY, it cures Dysentery, Cholera, Diarrhoea, Cramp and Pain in the Stomach, Bowel Complaint, Painter's Colic, Liver Complaint, Dyspepsia or Indigestion, Sudden Colds, Sore Throat, Coughs, &c. Used externally, it cures Boils, Felons, Bruises, Cuts, Burns, Scalds, Old Sores and Sprains, Swellings of the Joints, Toothache, Pain in the Face, Neuralgia and Rheumatism, Chapped Hands, Frost-bitten Feet, &c.

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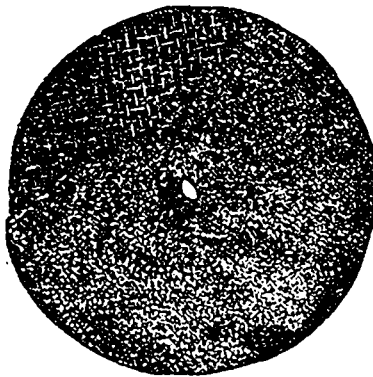
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Brown's Patent Spalt and Shingle Mill,

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Our Steam Feed for Circular Mills,

is now the Best Feed where Steam is the motive power. It is easily operated, is simple, rapid, and seems never likely to wear out; sixteen 16 ft boards, or eighteen 18 ft boards, have been cut by it in one minute. It is the established feed for steam mills; I make a specialty of its manufacture; will guarantee satisfaction.

Our Patent Twin or Span Circular,

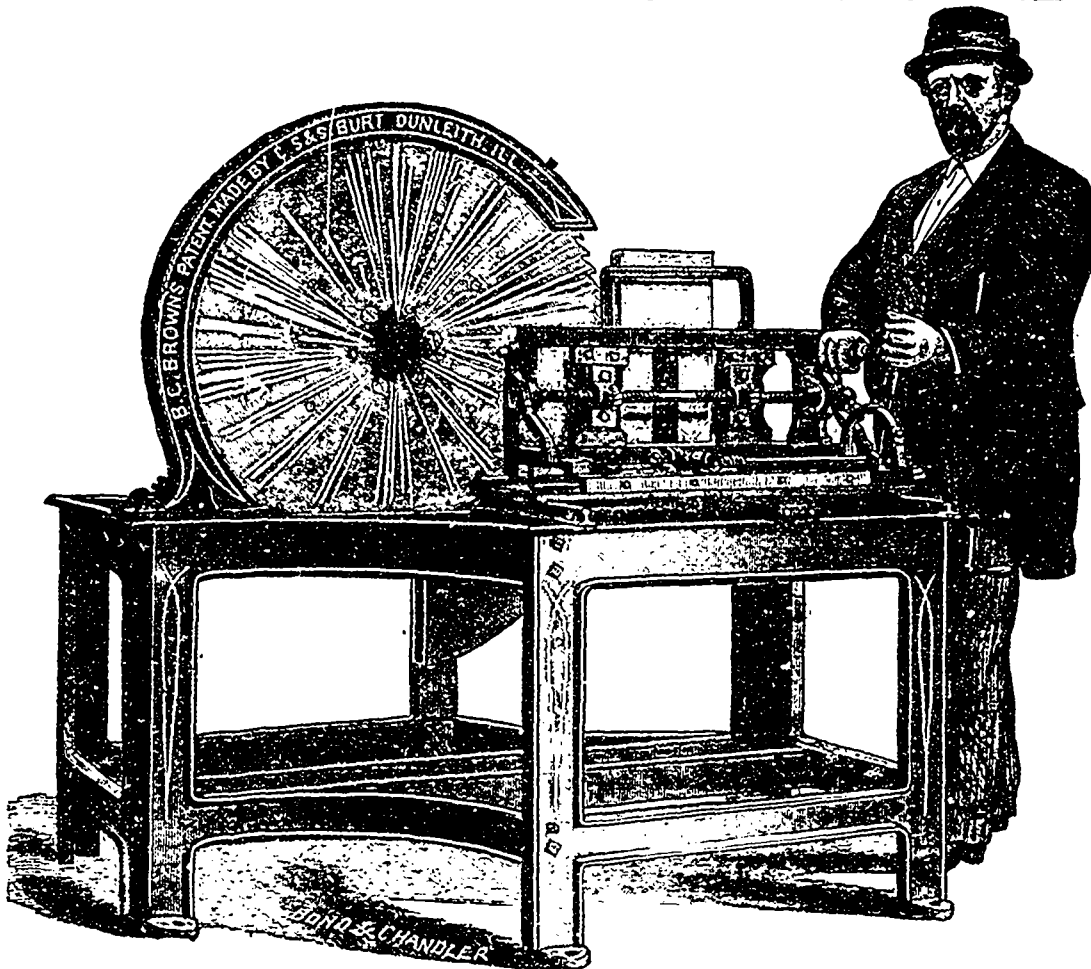
with Steam Feed for Steam Mills, and Rope or Rack Feed for Water Mills is fast coming into general estimation and is used in place of Gang Slabber in our best Canadian Mills. One of our Span Circulars which will slab logs 25 inches in diameter down to 7 and 8 inch stocks, will do the work of three slabbers, with an immense reduction in first cost, running expenses and labour. Two of these machines can be seen at work in Messrs. Gilmour & Co's Mill, Trenton, and Georgian Bay Lumber Co's Mill, Waukegan and Port Severn. I am also introducing a new style of Mill Engine, neat, substantial and simple, with Corliss Frame and Balanced Valve, all carefully designed and honestly made.

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is now well-known and highly appreciated, when placed at work in the mill it slugs out its own praise, I keep it constantly on hand, ready for immediate shipment.

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are too well known to need any reference, any further than to say that I spare no pains or expense to have my work all first-class and give satisfaction, and as I make Heavy Saw Mill Machinery a specialty, any party wanting a First-class Mill will find it to their advantage to give me a call.



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