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The Wisconsin lumberman, devoted to the lumbering interests of the northwest.

August, 1874

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August, 1874

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THE
Wisconsin Lumberman,

DEVOTED TO THE

LUMBERING INTERESTS OF THE NORTHWEST.

AUGUST, 1874.

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WISCONSIN LUMBERMAN.

VOL. II.—AUGUST, 1874.—No. 5.

AN IMPORTANT PROPOSITION.

Messrs. Hersey, Bean & Brown, one of the largest lumbering firms in the northwest send us an article which, on account of its soundness of argument and the important proposition it contains, is made the leading and important article of this issue of THE WISCONSIN LUMBERMAN. The proposition made by Hersey, Bean & Brown is practicable if the mill men of the northwest will consider the question properly and act earnestly.

STILLWATER, Minn., Aug. 3, 1874.

EDITORS OF WISCONSIN LUMBERMAN :
—We have been very much interested this morning in reading in your valuable publication an article signed "Hot facts for Lumbermen." The writer has condensed a great many facts in a small compass and that will insure its being very generally read ; as it ought to be by every manufacturer of lumber in the West. After stating the *fact* of an over production which naturally reduces values and causes loss to all concerned, he says: "Reduce the Supply." Now we venture the assertion that no one will dispute that being the remedy for the present condition of things. Then comes the question of how to do it. It is a fact patent to every

one that the sawing capacity of the mills is greater than needed for the present wants of the lumber trade. And we do not believe there are any parties who would build new mills with the present outlook for the trade. Then it would seem as if the remedy was in the hands of the owners of the lumber mills and that if each mill in the West would cut one quarter less than they cut during the season of 1873 it would produce the advance needed, say \$2 per thousand as mentioned in "Hot facts." Now then let all the mill owners in the west come together in person or by proxies and bind themselves under a strong written agreement that they will not saw nor allowed to be sawed in their mills over a certain amount of feet during the season of 1875. Let the amount each mill shall cut be determined by disinterested committees and let the amount fixed by them be binding on all parties ; having large forfeitures if necessary. We think there would be but very little objection to this by any mill owners here in this section of country. The over cutting of logs cannot be stopped by the mill owners reducing their log operations as we all know by our last winters operations

for the loggers argued at once "now is my time." The mill owners are not cutting near as much as formerly and they will surely want the logs or if they do not *they will saw by the thousand and I will go in.* The result is still an overstock and worse than all the rest is sawing small lots for these parties for they will sell for what they can get and thereby break down the market and make prices at which the "regular dealer" must sell or suffer by being obliged to carry his stock. We hardly know who would object to this unless it would be yard men who have no mills. But one very prominent yard man said to us the other day that he would obligate himself to not buy of any mill owner who refused to go in to such an arrangement, for, as he said, he never had made and could not make any money in handling lumber at the prices now ruling and that he had made and could make money if the prices ruled higher and thought it fully as much for the interest of the yard man as for the mill owner. We should like to enter into an agreement of this kind with *all* the mill owners on the Mississippi river and its tributaries as well as those of Wisconsin and Michigan.

HERSEY, BEAN & BROWN.

THE amount of logs run out of Cass river, Mich., this season, is 48,260,800 feet, or *less than one-half* the amount got out of the same stream last year. The logs are reported all out that can get out this season. In 1873 there were 109,458,140 feet run out of the Cass; 99,913,955 feet in 1872; and 55,841,618 feet in 1871.

THE RECIPROCITY TR

June 18, 1874, President Grant sent to the Senate of the United States a short message advising the adoption of a reciprocity treaty with Canada, the text of which accompanied the official message. Congress was then on the point of adjournment, and knew by the excitement the very term "reciprocity" produced throughout the country, that the subject was one which demanded careful and thoughtful discussion. Therefore, despite the urgent tone of the President's message, Congress adjourned without definite action upon the proposed treaty. Since the subject of reciprocity with Canada has been officially brought before the people, discussion thereon has waged hot and strong both for and against. It is the province of the WISCONSIN LUMBERMAN to discuss the question more particularly from the standpoint of the effect of a reciprocity treaty upon the lumber trade of the country.

That portion of the proposed treaty, which if accepted by England and the United States, would influence the lumber market, is as follows:

ARTICLE IV. It is agreed that the articles enumerated in the schedules A, B, and C, hereunto annexed, being the growth, produce or manufacture of the Dominion of Canada or of the United States, shall, on their importation from the one country into the other, from the 1st day of July, 1875, to the 30th day of June, 1876, (both included), pay only two-thirds of the duties payable at the date of this treaty on the importations into such country of such articles respectively; and from the first day of July, 1876, to the 30th day of

June, 1877, (both included), shall pay only one-third of such duties; and on and after the 1st day of July, 1877, for a period of years mentioned in Article XIII of this treaty, shall be admitted free of duty into each country respectively.

For the term mentioned in Article XIII no other or higher duty shall be imposed in the United States upon other articles not enumerated in said schedules the growth, produce, or manufacture of Canada, or in Canada upon such other articles the growth, produce, or manufacture of the United States than are respectively imposed upon like articles the growth, produce, or manufacture of Great Britain, or of any other country.

SCHEDULE A—Consisting of the following natural products: Animals of all kinds; ashes, pot, pearl, and soda; bark, bark extract for tanning purposes; bath bricks; breadstuffs of all kinds; bricks for building and fire-bricks; broom corn; burr or grind-stones, hewed, wrought or unwrought; butter; cheese; coal and coke; cotton-wool; cotton-waste; dye-stuff; earths, clays; ochres; sand, ground or unground; eggs; fish of all kinds; fish, products of, and of all other creatures living in the water, except fish preserved in oil; firewood; flax, unmanufactured; flours and meals of all kinds; fruits, green or dried; furs, undressed; grain of all kinds; gypsum, ground, unground, or calcined; hay; hemp, unmanufactured; hides; horns; lard, lime; malt; manures; marble, stone, slate, or granite, wrought or unwrought; meats, fresh, smoked, or salted; ores of all kinds of metals; pelts; peas, whole or split; petroleum oil, crude or refined, or benzole; pitch; plants; poultry of all kinds; rags of all kinds; rice; salt; seeds; shrubs; skins; straw; tails; tallow; tar; timber and lumber of all kinds, round, hewed, and sawed, manufactured; tow, unmanufactured; trees; turpentine; vegetables; trees; turpentine; vegetables; wool.

Article XIII referred to is simply the specification of the duration of the treaty placing it at twenty-one years.

The lumbermen of the country are seriously divided upon the question of reciprocity. The dealers throughout all the Eastern and Middle states are strongly in favor of reciprocity. Of course the mill-men of Canada are even more interested in the formation of the treaty. Michigan manufacturers and those of Pennsylvania are interested in having the present duties of lumber maintained. While the manufacturers of Wisconsin and Minnesota will be least effected by the removal of the duties from lumber. There is no question but the formation of a reciprocity treaty with Canada would seriously embarrass the already struggling lumber manufactures of the country. Not only would the manufacturers of Maine, Pennsylvania and Michigan be obliged to let their mills stand idle for years—until the scarcity of pine in Canada materially advanced prices—but the whole lumber business of the south, which is just now developing a great industry, would be immediately stricken so sorely that further development, for a long term of years, would be prevented. The chief argument used by many who are in favor of reciprocity—when speaking, of the matter as it refers to lumber—is that it will be a matter of justice to the Eastern dealers and consumers and will compel pine land owners to save their timber.

True enough it will compel pine land owners to save their timber, but it will not advance the price of that

timber until the forests of Canada are cleared away. The immediate effect will be to increase the value of Canadian pine timber and decrease the value of that in the pineries of our own country.

So far as the lumber interests of the country are concerned in this matter of reciprocity with Canada it may be narrowed down to these two questions :

Will the benefit derived by eastern dealers and consumers offset the suppression, for a period, of the lumber manufacturing interests of the United States.

Is the business of the second great industry of our land—the production of lumber—worth as much to our country as the ability to procure Canadian lumber for a dollar or two less per thousand than it can be manufactured for in our great pineries.

Common lumber is lower, to-day, than the cost of manufacturing ordinary mill-run ; and those manufacturers who save themselves actual loss on the cost of cutting, sawing and marketing their lumber—to say nothing of the value of their timber—do so only by having a superior quality of logs and making on their upper grades enough to offset the loss on common lumber.

It is time the discussion of the question of reciprocity with Canada was commenced. THE WISCONSIN LUMBERMAN will furnish a series of articles upon the subject, and would also invite, specially, contributions from all persons who may feel an interest in this important question either for or against.

THE SITUATION OF THE LUMBER TRADE.

Up to the date of present writing—August 1st—there is no improvement in the lumber market either in amount of sales or advance in prices. During the past two months the dealers have been comparatively busy in stocking up their yards and now are pretty generally supplied for the fall and winter trade. As a class the mill men are having a hard and unprofitable season. All through the spring and summer months the manufacturers have labored on, hoping for and expecting a revival of business which should at least create active sales for lumber, even if a material advance in prices did not occur. The general business of the country has scarcely maintained the poor degree of activity which was the spring standard and therefore the lumber interests have suffered all through the season. Manufacturers of lumber are thoroughly discouraged and mills are shutting down all through the pineries of the north-west. Many manufacturers are not only hampered for the present, but are already beginning to realize that unless there is a great improvement in the lumber market by the middle of September, there will be no possibility of accomplishing any work next winter. Just at present there is the usual stagnation of business incident to the harvest season, but business men seek in vain for any indications of anything more than a moderate fall trade. It is beginning to be acknowledged in all business circles that there can be no remarkable activity this season—such as is necessary to materially advance prices of

umber. With the moderate stocks of logs and lumber all through the country and the prospects of little work being accomplished next winter there is only wanting a fair renewal of business life, to advance lumber materially. It has seemed strange to many that unemployed capital does not seek investment in lumber at present prices. Capitalists argue that there are now so many mills throughout the pineries and that transportation facilities are so good, that manufacturers are enabled to glut the market at any time when prices shall pay a fair profit. The truth is that manufacturers have got to take some measures for self preservation and come to some understanding relative to the supply of lumber they will place upon the market. If they do not do this the time will soon come when the pine forests will be swept away and the pine land owners and manufacturers of lumber will be impoverished as the land they have denuded. Manufacturers must shut down their mills until the scarcity of lumber advances the prices, and then some understanding must be arrived at whereby the quantity of lumber sawed will be only the amount actually necessary to supply the demand. The present season will operate beneficially to the trade in one respect; namely, that scores of manufacturers will be obliged to suspend all operations in the woods next winter and the heavy firms will be so cramped that their operations will be comparatively limited. These manufacturers, also, who are pine land owners, begin to realize that their money is quickest made by sav-

ing their standing timber and they will be more careful of reckless slaughter of pine than they have been during the past few years. We may briefly recapitulate by saying:

1st. The great lumber markets are only fairly stocked.

2nd. More than the usual number of mills are shutting down at this season of the year.

3rd. Manufacturers are so cramped, financially, that there is a hope that but little work, comparatively, will be done in the woods the approaching winter.

4th. There is no certainty that there will be a revival of the business of the country sufficient to materially advance the price of lumber this fall.

5th. Some prompt and efficient measures should be taken whereby the amount of logs got in next winter will be so regulated that manufacturers will be enabled to control the opening prices for lumber next spring.

6th. Save your pine timber for the future and allow lumber to advance to a point were at least the cost of manufacture will be returned.

THE amount of lumber shipped this season from East Saginaw, Mich., is 93,960,795 feet. The shipments from Bay City have reached thus far, 160,453,041 feet. The total shipments from the Saginaw river to date of July 31st, are as follows:

Lumber, feet.....	254,413,536
Lath, pieces.....	24,120,500
Shingles.....	35,119,500
Staves.....	9,083,208
Hoops.....	12,885,000
Timber, cubic ft.....	1,361,500

THE YELLOW PINE BUSINESS.

It is only within a few years that the yellow pine of the south has attracted the attention of lumbermen and builders to the extent that so valuable a timber merits. The production of yellow pine lumber is now one of the most important business pursuits of the south, but it should become a leading feature of the industry and capital which will again rank the southern states equal commercial influence and prosperity with the north. For flooring yellow pine has no equal. Even as a cabinet wood it is becoming popular, for when finished in oil its beauties are superior to almost any light colored wood. Yellow pine is rendered extremely tough and durable by its resinous nature, yet is devoid of the hard brittleness which characterises Norway pine or hemlock; being indeed, fully as elastic as white pine and much stronger. In the St. Louis market yellow pine is now becoming a leading commodity; while in New York, Philadelphia and the great eastern markets, every day increases the popularity and sales of yellow pine. There are rare opportunities for profitable investment in the pine lands of the south, and capital will soon make the discovery and improve the chances. We gain much information relative to southern pine from the following extract from the *Brunswick Ga., Seaport Appeal*:

No branch of business has developed more rapidly than has the manufacture and shipment of yellow pine lumber and timber during the last four years, through the ports of Brunswick and Darien. Below we

give the shipments for four years, ending May 31 of each year:

1871—	27,240,437 feet,	valued at.....	\$ 513,221.66
1872—	57,578,612 "	"	1,021,379.00
1873—	77,658,574 "	"	1,390,342.00
1874—	123,632,779 "	"	2,028,898.00

Which shows that there has been shipped during the four years, 286,127,102 feet of lumber and timber, valued at \$4,878,309.66. Allowing 4,000 feet of mill and ranging timber as the average production of each acre, and we find that say 71,526 acres have been denuded of that class of timber. After the lands have been thus stripped of the larger class of timber there still remains timber sufficient for the profitable establishment of turpentine farms. Allowing the value of the timber lands to be, say \$2 per acre, which is certainly a large allowance—and we find that \$4,806,783.66 has been realized from the manipulation and manufacture of the industry through the scope of country tributary to the ports of Brunswick and Darien.

If our estimates as to the production of lands are not in error, and they are based upon figures generally admitted to be correct, the intrinsic value of our pine lands convenient to present and probable lines of transportation, are far above present sales and valuations. After being stripped of ranging and mill timber these lands are intrinsically worth at least the prices now asked for the establishment of turpentine farms, and we are confident that within less time than a decade the correctness of our opinion will be fully verified. We know of no more inviting field for speculation than in the yellow pine lands in this section of the south. The wants of the world will require every foot of lumber and timber, and every ounce of rosin and turpentine. Then, to our friends in this region we would say, be of good cheer, you have fortunes in your pine lands which will yet be "panned out."

The *Hinesville Ga., Gazette* also furnishes some interesting statistical in-

formation from which we learn that over two hundred million feet of yellow pine lumber were exported from Georgia in 1873, and that the product this season will be increased to 300,000,000 feet. The business of manufacturing yellow pine lumber is rapidly increasing in importance and will, in the near future, constitute one of the chief features of the growth, prosperity and wealth of many of the southern states.

OPINIONS OF LARGE MANUFACTURERS.

Hon. G. W. King of Humbird, Wis., one of the heavy lumbermen of the state, called recently at the WISCONSIN LUMBERMAN office. Mr. King's long and practical experience in the lumber business renders his opinion, on the present situation of the trade, of decided value. Mr. King fully agrees with the expressions given, in the July number of this publication, by the author of "Hot facts for lumbermen" and unqualifiedly endorses the letter from Hersey, Bean & Brown in this issue of the WISCONSIN LUMBERMAN. Mr. King believes that there must be a large decrease in the amount of lumber manufactured before the trade can hope to be in a favorable condition; he not only believes so, but is one of that class of pine land owners who are taking initiatory steps to produce a reduction in the amount of lumber manufactured, by reducing his usual business fully two-thirds. Mr. King acknowledges that the cut on Black river last winter was very light in comparison to the winter of 1872-3, yet claims that there are now logs enough in the Black and its tributa-

ries to supply a proper demand from that stream during the next year; he also considers that the amount of lumber and logs already cut for the Mississippi markets is all sufficient to meet the demand of that market far into the next season, notwithstanding that the supply is far short of the amount upon the market in 1873. If the cut on the Black river and its tributaries should continue as large for the next three seasons as it has for the past two, Mr. King considers that the pinery of the Black river valley would be virtually exhausted. From all portions of the country we obtain frequent information that the larger manufacturers are resolved to curtail future operations as the only plan left to secure themselves from actual loss. Pine land owners know that they are not realizing one-half the value of their stumpage, and are beginning to be willing to allow their property to increase in worth instead of destroying it. We have heard many prominent manufacturers express their belief that the present season, seemingly so unfavorable, will result in permanent good; that manufacturers will henceforth be much more careful than they have been about receiving larger stocks of logs than they can advantageously handle. Once let the manufacturers feel and know the benefit they would derive from systematic cutting of timber, in relation to the amounts to be furnished by the different pineries, and there would be but little difficulty in maintaining associations in the several pineries that would regulate and control the lumber market to the advantage of all producers and pine land owners.

LUMBER MATTERS IN MICHIGAN.

July 29th the lumbermen of the Saginaw valley met at East Saginaw pursuant to a call issued by the Lumbermen's Association. The subject under consideration was the reciprocity treaty with Canada. We are informed that prominent lumbermen from Chicago, Detroit and nearly every important place in the Saginaw valley, were in attendance. The opinions of the gentlemen in attendance are well worth considering. For a full report of the arguments of those who expressed themselves upon the subject of reciprocity we are indebted to the *Saginaw Weekly Courier*. We reproduce those opinions in full, together with the report of the business transacted, for the careful consideration of our readers.

Mr. Bradley on taking the chair stated briefly the object of the meeting. During the last few days of the last session of congress there came before that body a treaty for reciprocity trade with Canada. The bill appeared to emanate with the secretary of state, but so quiet had been the preparation of the bill that but few were aware of its preparation until brought before congress. The matter appeared to have been worked up quietly but effectively. Previous to the advent of the bill members were in receipt of documents and printed arguments in favor of reciprocity. About the time the intent of the bill became public Mr. Bradley waited upon the secretary of state, and found that officer of the government fully imbued with the idea of reciprocity, and fortified with peti-

tions from different parts of the country, resolutions of boards of trade, and letters from prominent commercial bodies. It transpired that the proposed treaty was an outgrowth of the liberal movement in Canada. The liberals favor annexation, and they propose reciprocity to assist and popularize their scheme. Continuing the conversation, Mr. Bradley desired to enter a protest from the state of Michigan against the consummation of a treaty detrimental to the manufacturing interests of his state and the northwest. Mr. Bradley went further to show to the secretary of state that the board of trade and persons signing the petitions in favor of the treaty were directly interested in free trade. This was especially the case with the petition from Detroit. From what the chairman could ascertain at Washington, he realized that a strong and organized effort was being made to carry the measure. Thus far the friends of reciprocity have been in the minority, but there is no telling what the future may bring forth, and we should organize ourselves on the best possible footing and present our side of the case to congress at its next session.

Mr. Ezra Rust on being called upon, said that about the only idea he had upon the subject was that we must organize and oppose the treaty. The best way, probably, to do this, would be to appoint committees who shall take the matter in hand, prepare statistics, collect facts and figures, and report at the meeting of the National Association to be held in this city September 15th.

Mr. Newell Avery of Detroit, was in favor of united action in opposition to the measure. The influences at Washington, as shown by legislation, all strongly in favor of reciprocity. The action of the Saginaw lumbermen when the Chicago relief bill was pending, shows conclusively what may be accomplished by persistent and determined effort, and such a course he recommended in this case. The present subject is of more importance than the former, and requires a more determined effort. Perhaps the only thing that can be accomplished at this meeting is the appointment of committees, but the September meeting should be largely attended.

Mr. Pierson, of Chicago, spoke of the fact that since the war, now and probably for some time in the future, the people had been and would be heavily taxed to support the nation and pay its debt. Burdened as we are by taxation, it is manifestly unjust and unfair that a country which bears no part of our burdens should derive the benefits which belongs to us. Canada can produce for less, because of her cheap labor, with which we cannot successfully compete. He also urged united action on the part of our lumbermen.

Mr. R. G. Horr said that he had given this matter of reciprocity considerable study, times back, and came to the conclusion that it was matured and backed by an organization whose headquarters were in New York city, with branch offices in every city in the country. It is instituted for the purpose of breaking down our home institutions, our general system of

tariff, and organizing foreign capital. Salt and lumber are not the only articles affected, wool is included as is many other staples. This is called a reciprocity treaty. The speaker could not see any reciprocity about it. Canada gets all the benefit, and we don't get any. What do we want to export to Canada any how? Why is it that we always find Canadians and Englishmen so strongly in favor of reciprocity except from selfish or money making motives? We in the valley should organize and fight the organizations of England and free trade.

Colonel DeLand stated that the reason why boards of trade usually went in favor of breaking down the tariff was because they were in such close alliance with the heavy importers, while the capitalists favored it because such a treaty will eventually fix things so that high rates of interest will be made and the capitalists will pocket the proceeds. Aside from the injury done to our local interests by the treaty, the speaker said that the fact of opening the carrying trade to the Canadians alone, (the treaty provides that the Canadians shall widen and deepen her canals,) the American canals and railroads in the neighborhood of the borders would suffer.

C. K. Eddy, who was called upon as a friend of Canada, said that he lived in the Dominion for eight or nine years, during the pendency of the former reciprocity treaty. During that time the Canadian lumber interests thrived, but after the abrogation of the treaty he knew but little about it. He left.

The discussion was carried on at

some length, participated in by many of the gentlemen present, being much in the same vein as the remarks already given.

In order to bring the subject to a more definite shape, Mr. Avery of Detroit moved that a committee of three be appointed by the chair, whose duty it shall be to prepare facts and statistics to be presented to the meeting to be held September 15th.

An attempt was made to increase the committee to five, but the original motion was carried. Messrs. Ezra Rust, of Saginaw; Albert Miller, Bay City, and J. S. Estabrook, of East Saginaw, were appointed such committee.

On motion of Mr. Miller a committee of six on subscription, composed of Newell Bowman and A. W. Wright of Saginaw; R. G. Horr and C. K. Eddy, of East Saginaw; M. B. Bradley and Wm. L. Fay, of Bay City, were appointed. Nearly \$500 was subscribed at the meeting to defray the expenses of the committee.

On motion of J. S. Eastabrook, a committee of conference and correspondence was appointed.

The committee consists of the following gentlemen: Newell Avery and Thomas Palmer of Detroit; Albert Pack and J. K. Lockwood of Alpena; C. P. Hills and Jno. P. Nelson of Muskegon; Henry Howard and John P. Sanborn of Port Huron; Wm. M. Ferry and Mr. Hopkins of Grand Haven; Perry Hannahs and W. H. C. Mitchell of Grand Traverse; Eugene Smith of St. Clair, and A. Smith of Algonac; Thos. Snell and Mr. Crawford of Pigeon River; C. D.

Hale and J. D. Wickes of Tawas; J. L. Woods and John C. Waterbury of Lexington; H. M. Loud of Au Sable; Wm. Wonderley and Mr. Benjamin of Grand Rapids; Josiah Begole and Zack Chase of Flint; F. B. Stockbridge of Saugatuck; J. A. Hubbell of Houghton; C. Y. Osborn and H. A. Burt of Marquettee, G. W. Brown and J. Scranton of Ste St. Marie.

After ordering the proceedings published and designating the chairman of the committee of three as treasurer, the meeting adjourned to meet at the call of the committee.

A RARE CHANCE FOR INVESTMENT.

We call particular attention to the advertisement on tinted page, of saw mill for sale. From long personal knowledge of the location, capacity and general features of excellence, the editors of the *WISCONSIN LUMBERMAN* are enabled to recommend Mr. John C. Clarke's mill and property as particularly valuable. There is no better mill of its size in the country and the location is as perfect as one could wish even if he had the making of the surroundings himself. The mill is situated at Wausau, one of the most flourishing cities of Wisconsin, on Big Bull Falls where nature has not only made the power but actually, as it would seem, constructed her own races to make it more available. We are pretty thoroughly acquainted with a majority of the mills in the state and we can truly say that for location and general excellence of the property, we know of no mill that is better property than that of J. C. Clarke's at Wausau, Wis. The Wisconsin Valley railroad will be

finished to Wausau this year and then there will be railroad facilities for lumber shipments to all points west, south and east, as well as the present means of getting lumber to market, the Wisconsin river. We especially recommend Mr. Clarke's offer to the attention of capitalists.

THE CONVENTION OF CANADIAN LUMBERMEN.

The meeting in convention of Canadian lumbermen at Ottawa, recently, possesses an unusual significance from the fact of its being a movement in the direction of securing united effort for the reduction of the amount of lumber manufactured. By the proceedings of the convention we are convinced that Canadian lumbermen are in earnest in their endeavors to lessen the amount of annual production and are also ready to join hands with the manufacturers of the United States in positive agreement to curtail future operations. The Canadian lumbermen are willing to enter into written contracts to reduce the usual production one half, either by shutting down their mills or by curtailing operations in the woods. An agreement to that effect was signed by the lumbermen in attendance at the Ottawa convention, and the secretary instructed to correspond with the different lumbermen's associations of the United States and ascertain if they will cooperate with them in the general curtailment of production.

The plan of adopting and living up to such an agreement may at first seem difficult; but earnest effort on the part of the principal manufact-

urers will certainly accomplish the object of very materially reducing the amount of lumber produced. The time to fully consider the subject and arrive at definite understanding and agreement, will be at the convention to assemble at Saginaw, Mich., in September. If manufacturers of lumber would consider the benefits to result from united action, there would be an attendance at Saginaw of not less than one thousand lumbermen. The price of lumber is low and it is because manufacturers have overdone business. Meet in convention and *compel*, if needs be, a reduction of the amount manufactured. There isn't a manufacturer in the land but well knows that the money to be made in lumber will only come when the amount produced is such that the market can be controlled.

The action of the lumbermen of Canada in convention at Ottawa, is well worth heeding. The terms they offer are all right and should be accepted by the lumbermen formally and earnestly through the mediumship of the convention soon to assemble at Saginaw.

THERE is a chance for some one to make money in Milwaukee by the establishment of a saw-mill to cut long timber, that might be rafted across the lake. There is no more trouble in rafting long logs across Lake Michigan that there would be in floating them down the Mississippi. Holes bored through the end of long timber and cables run through as stringers, and the logs are comparatively safe.

A PLACE FOR YOUR MONEY.

The Valley of the Lower Fox—The Water-powers—The Iron and Timber Resources of the North—Manufacturing Towns.

Correspondence of the Wisconsin Lumberman.

GREEN BAY, Wis., Aug. 5.—Wisconsin presents to capital no grander field for investment, with the assurance of liberal profits, than the valley of the lower Fox river from Neenah to Green Bay. The waterpower is simply immense and very judiciously scattered as it were, nearly the whole distance of thirty miles. The raw material—iron and wood—in quantities almost inexhaustible, are barely more than a stones throw away. The grand forests of pine and all kinds of hard wood cover the entire stretch of territory from Fox River to Lake Superior. The beds of iron ore under lie thousands of acres of the same region, while Lake Superior even with its mountains of rich metal is only a days ride away. The advantages for shipment by railroad and water are not excelled by any locality. Labor is cheap because fuel and food are cheap. So that all the conditions of cheap manufactures are here fulfilled. Something has been done already, but not a tithe of this water power has been used, nor a hundredth part of this vast source of wrath utilized. A bare fringe of the forests of pine have been wrought into lumber. Before the days of railways in northern Wisconsin, many thousands of acres of valuable hardwood lands were cleared away, logged and ruthlessly burned by the early settlers, to make way for the advancing hosts of later civilization, and to provide subsistence for those already

on the ground. But now, with our railroads penetrating these forests, a value is fixed upon the timber of a considerable portion of this territory, and it only awaits the hands of capital to place it on the market and turn it into money.

At Neenah and Menasha large flouring mills and wooden manufactories have been put up and successfully operated. At Appleton an iron blast furnace, a woolen factory and several wooden manufactories are actively and profitably engaged. At Kankana and Depere large establishments of a similar character are being run with satisfactory returns, and yet many millions of dollars can find profitable investment in manufactures on these great natural water powers.

M. P. LINDSLEY.

THE total shipments from Williamsport for the season up to July 12th, is 141,737,169 feet, against 126,050,629 feet in the same time last year; or an increase in shipments this year of 15,687,530 feet. A pretty good showing for "dull times."

THE WISCONSIN LUMBERMAN speaks not of things or subjects political; but we would like to see so fine a man and lumberman as Mat. Wadleigh represent the 8th congressional district of Wisconsin, at Washington.

THE amount of logs run through the Black River boom at Onalaska is estimated at 175,000,000 feet. It is also estimated that the La Crosse mills will saw this season about 50,000,000 feet.

A FORCIBLE ARGUMENT.

J. Morrell on the Subject of Reciprocity with Canada.

In a letter to Hon. Simon Cameron. Mr. D. J. Morrell, President of the "Industrial League," gives his opinion of the proposed treaty with Canada, and strong arguments against the removal of the existing tariff. We take occasion again to invite correspondence and arguments in relation to the Reciprocity Treaty, as it is certain to be an important issue before the next Congress, and now is the time to discuss the matter.

Hon. Simon Cameron, United States Senate, Washington, D. C.

DEAR SIR: I regret to find, from recent information on which I can rely, that the rumors of some weeks since in regard to the renewal of the so-called "Reciprocity Treaty" relate to a scheme which, if successful, will substantially set aside the protection against foreign competition which existing laws give to our industries. Instead of the simple and comparatively harmless stipulations entered into in 1854 to open our markets free of duty to the raw produce of Canada, it is a general scheme of free trade in iron, steel, cottons, woollens, and almost all other manufactures, which are to be admitted from all ports of British America free of duty for a period of twenty-one years.

This is almost equivalent to a grant of free trade with England for twenty-one years; and we get for it—free admission to Canada, where we have little occasion to sell. Of what value is Canada or any part of British America to us as a market for manufactured goods? With all forms of iron, steel, and manufactures generally at prices in Canada lower than ours by the full amount of the duty, and, with all these articles seeking

our markets from the other side, how can we sell much to them under any considerable state of assumed reciprocity?

The Treaty now before the Senate (as I understand informally), does not propose any exchange of favors of equal value to each party, but is a most extraordinary and unprecedented concession of privileges to the Dominion; privileges to sell now what they may have of crude products to sell; and an invitation to them to develop every possible branch of manufactures to compete with and overwhelm our industries. Works planted along our border will receive iron, steel, and other things in the form of material free of duty from England, and will sell their finished product free of duty in the United States. Rail and bar mills, nail mills, plate mills, machine shops, Bessemer steel works, and every conceivable form of iron and steel works, can be placed opposite Buffalo or Detroit, with a guaranty of obtaining permanent supplies of stock, free of duty, and of having entire control of our markets for twenty-one years.

It strikes me as amazing that propositions, so dangerous alike to our revenues and our industries, should receive favor, or even consideration, at the State Department. I shall hope that in your committee, and in the Senate, they will meet with prompt and final condemnation. I can not believe that the Senate would favor the loss of revenues which would follow a renewal of the old Treaty; but when this great step in advance is taken—when a country of vast coterminous area is singled out for the inauguration of almost entire free trade in manufactured goods—I am at a loss to know what interest of our own country is consulted, or what it is that moves the representatives of our own government to give it a moment's consideration.

As for the British Providences, of course we know what they need and

what they hope to attain. They need—and can not get elsewhere—renumerative markets for their supplies of raw produce. They have few manufactures, because they have not encouraged them, and have no local demand that is not almost wholly supplied by Great Britain. How then can opening their markets to our manufactures benefit us? Clearly there is another purpose in mind, which is the establishment in Canada of manufactures substantially British, the transfer of British capital and machinery to our frontier, there to make from the same low-priced materials, as in England, all the goods that our markets in the future will take.

Under the treaty a rolling mill in Canada can make rails and merchant bar from English iron, paying no duty, whether pig or scrap, and can supply Chicago or any port of the west, at rates ruinous to those who pay duty on their materials as the law requires.

Not only will this deceptively-framed treaty transfer millions of British capital to Canada to manufacture for our markets, but American capital will be driven there also. No considerable manufacture of metals in our own country can stand the trial of such competition. There are no natural barriers to the erection of any class of works in Canada. It is but a step from the iron mills at Cleveland and Buffalo, for instance, to the other shore of the lake, where British iron may be delivered cheaper than at New York, in the form of pig or bar, and the more finished forms could certainly be sold at rates destructive to the establishments on this side the line.

The proposition really is to abolish the tariff on the great array of manufactures named in the treaty schedule. If the foreign producer can plant his works on the Canadian frontier, with a guaranty of twenty-one years' immunity from all tariffs, it will pay him to go, even from Ger-

many and other countries on the continent. In such case what will be the effect upon the revenues?

We have no reciprocity to ask for from Canada. Our manufacturers pay little or no duty on going there as things now are; and our crude or agricultural produce is all free of duty. What more do we want of them? Indeed, we care very little for the privileges already given us. Their market is not a hundredth part of ours whether open or closed. We have little interest in any policy the dominion may adopt. England might as well ask us to open our markets to all her manufactures, because we may sell a few sewing machines, or hay forks, or other specialties there, as we do now.

With all legislation openly had, and duly resolved on by our representatives in Congress, we will try to be satisfied, but I hold that the bureaux of the executive department have no right to repeal our laws in secret, and abolish the well-considered protective features of the Tariff, through which alone our works can sustain themselves against foreign competition. Let us at least have the open Senate for the consideration of this measure, that the people may see who are actively engaged in the sale of their birthright for a mess of pottage.

I beg you to believe that I do not write to you at this length because I have any doubt of your opinions or action. The industries endangered by the Treaty are certain of finding a defender in you, and I desire that this earnest protest may have, through you, some effect upon your Committee and brother Senators. In my judgment, and in the judgment of hundreds of business men, proprietors of extensive mills, who will endorse all I say in this paper, twenty-one years of free trade with Canada, will bring destruction to many of our industries, will embarrass the revenues, and retard the progress of the country.

There has been a steady tide of immigration from Canada to the United States; the Treaty will turn it the other way. There has been a feeling in Canada in favor of annexation, which the Treaty will utterly destroy. None of its pretended benefits will compensate for the injuries which will assuredly flow from it. Neither the people nor their representatives have asked for it or sought to make it.

There appears to be a concerted effort on the part of certain newspapers to misrepresent public sentiment on this subject. It has been charged by the papers of the Dominion that a considerable sum belonging to the secret service fund was carried with them to Washington by the negotiations of the Treaty, and I am advised that some part of it has been expended to pay our old friend D. A. Wells for writing up the matter in the New York press. Opinions manufactured in this way will not impress the people very strongly, and should have but little weight with the Senate of the United States.

Yours, truly,

D. J. MORRELL, Pres't,
The Industrial League.

An article in the July number of the WISCONSIN LUMBERMAN entitled "Hot Facts for Lumbermen," has attracted much attention among prominent lumbermen who are beginning to realize the necessity of curtailing the amount of lumber manufactured. In this issue of the WISCONSIN LUMBERMAN we are favored with a correspondence from one of the largest lumbering firms in Minnesota, Messrs. Hersey, Bean & Brown of Stillwater. We call particular attention to their article as endorsing the views of a former correspondent of this publication and also as indicating that manufacturers are

beginning to be in earnest in their efforts towards regulating the lumber trade. The lumbermen themselves can control the market so as to have their business prove remunerative if they can only be brought to the habit of working together for mutual good. We invite such sound advice as given by Messrs. Hersey, Bean & Brown, for publication in the WISCONSIN LUMBERMAN.

THE front of the Upper Wolf, Red River and West Branch drives, (these have united) reached Shawano last Friday. Owing to the low stage of water it will probably be a long time before the rear, now one hundred miles back, passes New London. We understand that this is the last drive this season.—*New London News.*

MR. L. S. BEECHER, of Boston, one of the largest lumber dealers and manufacturers in the United States is stopping at the New London House. We learn that he has a controlling interest in the drive above, and that the object of his visit is in relation to it.—*New London News* 22d.

THE Eau Claire river is so low that Ash's line of boats have been withdrawn from the upper river. Raftsmen are experiencing much difficulty in running out lumber, and occupy from three to four days in getting to the Mississippi, instead of eighteen hours, the usual time in good water.

L. M. PIERCE's mill and that of England, Taylor & Co., Oconto, are shut down for lack of logs.

The total loss by the recent great fire at Muskegon, Mich., is reported at \$200,000.

AT STILLWATER, MINN.

The Stillwater, Minnesota *Messenger* of July 31st furnishes the following information:

LOGS AND LUMBER FOR WEEK ENDING
JULY 31.

The regular monthly meeting of the Stillwater Lumbermen's Board of Trade was held yesterday. Ernest Hospes, president, and Sam Judd, secretary, in the absence of J. S. Proctor.

Present—Ernest Hospes, Ivory Mc Kusick, L. E. Torinus, Sam Matthews, Chas. Bean, Isaac Staples, Smith Ellison, E. W. Durant, Sam Harriman, Win. Staples, R. F. Hersey, Jacob Bean, D. Tozer, S. L. Cowan, John O'Brien, Sam. Judd, J. N. Castle, D. Bronson, Jas. Mackey, A. Tozer.

The president and secretary were instructed to make a pro rata assessment and collection of the scale made of the St. Croix corporation drive.

Voted, That on joint drives the pro rata of men allowed be in the proportion of two for long to one for short logs.

The price of scattering logs was fixed at the same figures established last month—\$10 for No. 1, and \$7 for No. 2.

The attorney for the board was instructed to proceed in the case of Lacy's scattering logs.

Trade until the middle of the week was very dull, including two small lots sold by Torinus to Sauer & Co., Prairie Du Chien, and one lot by Durant & Wheeler to Zimmerman & Pelan, Guttenberg, also a million feet small loose logs for sawing about the lake, three strings sold by Bronson to C. S. Getchell & Co., Afton, for shingles. This last mentioned lot were fair Yellow river logs and sold at \$11.50 rafted.

Wednesday Messrs. Schulenburg, Bloecker & Co. came into the market to buy stock for their mills here. Their purchases so far include James

Roney's Yellow river logs at \$11 per M feet on the stringers, Tozer & Maloy's Yellow river logs \$10.75 on the stringers, Walker, Judd & Veazie's Tewksbury logs cut on Yellow river \$10.50 on the stringers, Albert Tozer's Yellow river logs, Jas. Mathews 1,000,000 Yellow river logs, \$11. As there are but few more choice marks of short logs, Schulenburg will quite likely buy these in order to secure sufficient stock to keep their mill going the balance of the season. There are several fair lots of rafted short logs in the market, including Smith & Clendining's, Smith Ellison's, Ellison & Standard's, Samuel McClure's, Judd Orfi's, Walker, Judd & Veazie's Yellow river, Hersey, Staples & Bean's, besides other lots of desirable short logs.

We quote prices at from \$11 to 12.50 per M for choice short logs. There are in market a few Totogatics held at \$13.50 rafted and fitted of long stock. There is an abundance including all grades of white pine and Norway. There is but a light stock, however, of first-class long white pine, with a large stock of common long dimension logs.

The operations at the boom have been somewhat retarded by scarcity of help, a large number of the men having left to seek employment in the grain fields in this vicinity. Should the water not fall too fast the St. Croix boom will finish its labors for the season by August 15th. Present appearances, however, indicate that low water will prevent a considerable portion of the logs from coming through the boom.

The St. Croix has fallen from its highest stage reached at the last rise fully 9 feet and is now declining at the rate of 5 inches every 24 hours.

SHIPMENTS

Include one raft per Mark Bradley to Savana Bay for sale, Belle of Bellevue 8 strings, shipped by Torinus, Staples & Co., to Sauer & Co., Prairie du Chien.

Bro. Jonathan one log raft from Durant & Wheeler to Guttenberg, Bellevue and Cat Tail Slough.

Minnie Will, one raft from Gillespie to Lyons and Fulton.

The McDonald and Pearl came in yesterday and are waiting for trips.

The Penn Wright has completed her repairs and will arrive at the landing to-morrow. The Louisville will be in Monday and will go out for Cat Tail Slough. The Stillwater will get in Saturday noon and will leave at once for Muscatine and points above.

We learn that Capt. S. N. Cowan has purchased of S. I. Smith of Lyons Ia., all of this gentleman's Pine lands tributary to the St. Croix in Wisconsin and Minnesota. These lands are among the most valuable of the pine lands on Totogatic, Nemacogin, Clam and Yellow rivers, and Frog Lake. It is estimated that there are between thirty and forty million feet of No. 1 pine on the land purchased. The price paid is \$50,000, \$10,000 and \$0,000 a year for four years.

Mr. Smith retires from the lumber business, having erected an extensive paper mill in Lyons at a cost of \$70,000, and is manufacturing about 25 tons of paper per week, for which he finds ready sale for cash.

It is an unusual thing to start a fleet of lumber for the Mississippi on the present low stage of water; in fact we don't know if such a thing was ever before attempted; but the Weed lumber manufacturing company of Barnum started a large fleet last week. Their mill is so favorably located as to permit of their so doing with every prospect of getting out with no material hindrance. We wish the daring and enterprising company success—abundant success—*Grand Rapids, (Wis.) Reporter.*

A CONVENTION TO BE HELD AT CHICAGO.

A circular will soon be issued, by the lumbermen in Chicago, inviting a convention at Chicago in September next: The circular, we understand, is to be generally sent to the lumbermen of the Northwest, asking their opinion of the necessity of such a convention, and also asking pledges of attendance. If satisfactory replies are received by the Lumbermen's Board of Trade, such preparations as only Chicago can make, will be immediately undertaken by the Chicago lumbermen to render the convention something of unusual interest and benefit. The readers of THE WISCONSIN LUMBERMAN will soon receive the circulars asking co-operation and attendance. There is not a manufacturer or dealer in the Northwest who can afford to be absent from the convention if it is appointed to be held. Matters of vital interest to the trade will be discussed; and undoubtedly great good will be accomplished if the lumbermen of the Northwest can be made to fully realize the present situation of the trade and come to some agreement about the best policy to pursue in bringing the business of lumbering up to a point where it will at least pay a small interest on money and labor invested. Chicago is easy of access. No lumberman can afford to be absent. Pledge yourself to attend a convention at Chicago, and then go with the determination to take an active part in the proceedings, laboring for the future good of the trade.

Subscribe for the LUMBERMAN.

PRESERVATION OF WOOD.

The Thillmany Process to Impregnate Wood With Sulphate of Copper and Chloride of Barium.

The great and constantly increasing extent of our wood pavements demands that every person interested in its permanence should give attention to the best and most economical mode of preparing the same.

It is well known that the so-called "Nicholson Pavement," where the blocks are only dipped in coal tar, has proved a failure in all our cities. In some, where the "Nicholson" has been laid in the ordinary manner, it shows, at the expiration of three or four years, alarming signs of decay. In fact, no wood can be made to last any great length of time, unless the preserving substance is made to permeate thoroughly the pores of the wood, and as the coal tar cannot penetrate the wood, but merely covers the surface, it will be seen that, as soon as this coat is worn off the wood has no protection whatever, and will quickly decay. From dipping the blocks into coal tar results another great disadvantage. Generally we have to use blocks for paving, which are not thoroughly seasoned. By dipping such blocks into coal tar, the external pores are closed, the water or sap cannot evaporate, and decay will shortly take place. Matters grow worse as soon as the external coal tar coating on the surface of the street is worn off. Then the water can freely enter the pores at the top, of the block, but cannot be discharged at the bottom of the same because there the pores are still closed.

The really preserving substance of

coal tar is creosote, a light, ethereal oil, which evaporates at a very low temperature. The remaining constituents of the coal tar, consisting of greasy substances and minute particles of coal, cannot enter into the small cellular tissue of the wood, because of their tough, syrupy nature and form, as stated above, a surface coating, which can only accelerate decay.

Let us examine the wood and its constituents.

Wood, in its chemical combination, consists of a fibrous substance and a liquid filling up the interstices, called sap. The clear wood fibre, as demonstrated by chemistry, is composed of 52.4 parts carbon, 41.9 parts of Oxygen, and 5.7 parts of hydrogen, and is the same in all the different varieties, but the sap of each kind of wood contains a great many different substances; in pine the resin predominates, and the oak is well known for the superiority of its tanning qualities. Some varieties contain glutinous and saccharine matter, while from others we extract coloring pigments, salts and mineral substances, all soluble in water. Chemistry shows that it is almost impossible to destroy the clear wood fibre, and that it can be done only by the strongest acids or alkalis.

Wood, free from sap, will not decay for a very long time, even when put in the ground or exposed to rain or dampness. The cause of its decay, when so exposed, will be simply found in the different substances of which the sap is composed; its albumen parts act as yeast for all the others, and excite fermentation, which

finally ends in the destruction of the entire wood.

Sap is also the cause of its destruction by insects, as, for instance, the ship-worm, (*teredo navalis*). They do not bore into the wood to get the dry fibre, which contains no nourishment, but only for the sap. It follows therefore, that in order to preserve wood from decay, it is necessary first to remove the sap, and then fill up the empty pores with some anti-septic or preserving substance, which will keep the water and dampness away from the clear wood fibre.

To obtain this result has been the study of scientific men for more than thirty years past, both in this country and in Europe especially, where different methods have been experimented with, and but few have given satisfaction or been put to practical use.

Sulphate of copper (blue vitrol) has been found to answer the best, but the great disadvantage of it is the fact that it is soluble in water, and therefore easily washed out by the same, wherever the so prepared blocks of wood are exposed to rain or moisture. To overcome this obstacle has been the object of our process, by which sulphate of copper is made insoluble in water by the addition of chloride of barium, thus forming sulphate of baryta.

The sulphuric acid of the copper salts combines with the baryta, and forms an insoluble substance, sulphate of baryta, and fills the interstices of the fibre, petrifying the pores, and a part of the oxide of copper enters into a combination with

the organic substances of the fibre of the wood.

Wood prepared after this method has been in use on many European railways, and for many other purposes, for the past seventeen years, and has proved to be more substantial than wood prepared by any other process.

Soft wood, such as pine, white-wood, beech, etc., which, unprepared, only lasts from two to three years, has been found, when prepared by our process, to be in good and sound condition after sixteen years of service.

L. P. GILBERT'S LOG TURNER.

One of the most ingenious devices for labor saving is an invention for turning logs, patented April 14th, 1874, by Mr. L. P. Gilbert, of Fort Atkinson, Wis. The machine is far the most perfect one yet invented for rendering obsolete the hand labor formerly required in the turning of logs when upon the carriage ready for the saw. Mr. Gilbert's invention is of decided value and will, when brought to the attention of mill-men, meet with their unqualified endorsement and favor. The well-known firm of E. P. Allis & Co. will probably enter into the manufacture of these machines. In the next number of THE WISCONSIN LUMBERMAN we shall give a full illustration and description of this valuable invention for the benefit of the readers of this publication.

You will receive a circular inviting you to attend a lumbermen's convention in Chicago. Go!

LUMBERMEN'S CONVENTIONS.

Lumbermen's conventions are getting popular. Three or four years ago a lumberman's association was a rare thing. Now almost every important lumber market or lumber manufacturing locality is possessed of a "Lumbermen's Association" or "Exchange" or "Board of Trade." The lumbermen, as a class, are beginning to recognize the value of association, and the result is seen in the numerous organizations effected this season. Wisconsin and Minnesota, thus far, have not fully appreciated the situation in this respect, but it is to be hoped that the lumbermen of the northwest proper, will commence this winter the foundations of associations that will be calculated to be of decided value to themselves and to the trade. Lumbering in Wisconsin, especially, needs systematizing. We want a thorough inspection law based upon the standard adopted by the Chicago Lumbermen's Board of Trade. The law is needed as a measure of protection, if not for the facilitation of business. There are other measures of importance for legislative action. Thoroughly organized associations can best secure results needed. It is time then that Wisconsin lumbermen began to form associations in different localities, and then all pull together for mutual good and benefit. Organizations are needed at Oshkosh, Green Bay, some point on the Wisconsin river, Black River Falls or La Crosse, Eau Claire or Chipewewa Falls and at Milwaukee. The only way to obtain influence is by

united effort. The lumber interest is the greatest interest in the state and it should be respected as such. Only through the medium of associations can the power for good of the lumbermen be concentrated. Let us then first have local organizations and then attempt something like a state association. Good will come of the effort. Let it be made.

THE LUMBERMEN'S CLOTHING HOUSE.

Simonds & Brooke's—The Favorite Clothing House in the Northwest—How Mr. Simonds Went Back on Lumbering and has Established the Most Popular Wholesale and Retail Clothing-House in Wisconsin.

Simonds & Brooke's great clothing house, 382 East Water street, Milwaukee, is the most popular house of its class among lumbermen. It is also one of the largest business houses of the northwest, their stock ranging up among the hundred thousand of dollars in worth, and occupying four entire floors of one of the largest stores on East Water street. The firm of Simonds & Brooke has always made quite a specialty of the trade from the lumbering district, and is known for its liberal dealings with its customers from those localities. Long years ago, when western New York boasted of its forests of pine, Mr. Simonds handled lumber largely and refers back to the time, thirty years ago, when clear stuff pine lumber could be had for *five dollars* per thousand feet; that too, in the valley of the Genesee. Coming to Wisconsin, Mr. Simonds was naturally attracted to the lumber regions and spent much time among the pineries of Wisconsin where he formed

an extensive acquaintance which has stuck to him with its increasing trade, ever since he opened his large establishment in Milwaukee. So well and favorably known is the house of Simonds & Brooke that the usual commercial travelers are not needed to introduce their goods to patrons; the only difficulty being in fully supplying the trade which comes to them through the long established reputation of the firm. Mr. Simonds has been a practical lumberman himself and appreciates the difficulties that sometimes attend the lumber business; therefore he has always proved a reliable, lenient and faithful friend to all his customers in the pineries of the northwest. The result is the up-building of one of Milwaukee's largest houses, wealth to that firm, and the ever-increasing good will of all who are fortunate in forming their acquaintance. A lumberman especially is always cordially greeted by Mr. Simonds, and whether he wishes to buy goods or not, if he gets away from Mr. Simonds' genial conversation and hospitality in any reasonable length of time it will be because the head of the firm of Simonds & Brooke is unusually busy.

Port Huron, Mich., has log thieves.

The shingle mill of D. C. Bowen & Co., Montague, Mich., has a capacity of 85,000 per day.

The steam saw mill of Williams & Bros., Saginaw City, was burned July 37; loss \$40,000; insurance \$30,000; principally in eastern companies.

PEIRCE & WHALING.

Magnitude of the Iron Business of the Northwest—Proof of Milwaukee's Uninterrupted Commercial Progress.

The MILWAUKEE JOURNAL OF COMMERCE pays the following merited tribute to one of Milwaukee's most enterprising and widely-known business houses.

The firm of Peirce & Whaling is so well known to readers of the MILWAUKEE JOURNAL OF COMMERCE that we shall attempt no description of their warehouse, Nos. 133, 135, 137, 139, 141, 143, 145 and 147 West Water street, or of their perfect machinery and admirable methods of doing business, or of their wisely liberal style of advertising. It is hardly exaggeration to say that this energetic house is as widely-known as any wholesale house in any line of business in the northwest. It is favorably known to the trade, not only for its importance as the largest heavy hardware house in the west, but for its enterprise in keeping up its assortment of goods, for its courtesy and promptness in correspondence, for its honorableness in fulfilling orders, and for having inaugurated in this market the policy of small profits on large transactions, in place of the old-fashioned policy of immense profits and little business.

The fact that Peirce & Whaling, during the months of reaction following the great disaster to the iron interests of the country, have steadily increased their trade, making up in one quarter what was cut off in another, and finding no occasion to reduce their extensive force of workers, is a satisfactory proof of the general prosperity of the northwest and of Milwaukee's identity with this prosperity. It shows that the iron mercantile interests, as well as the iron manufacturing interests, of this point, are soundly established and carefully conducted with reference to the

legitimate needs of the vast territory of which Milwaukee is the distributing centre.

Messrs. Peirce & Whaling, it may be remarked, deserve all the prosperity they have had. It is the product of incessant vigilance, unwearied industry, the closest calculation and a conscientious avoidance of every element of speculation. This house has been enabled by the dullness in the demands of other markets during the past few months, to keep its stock down very close and yet supply its large trade directly from eastern manufacturers, with more than its ordinary promptness. For several months past its monthly sales of iron and nails have nearly equaled its stock on hand. We mention this fact to show the sagacity and care with which this vast business has been conducted during the most trying period in the history of the American iron trade.

Instead of a description of the establish of Messrs. Pierce & Whaling, we have through their aid obtained a pretty thorough inventory of the articles in which they deal which we present for the information of the trade at large as well as of any reader who cares to know what the heavy hardware and iron trade consists of. We have learned, to our surprise, that the item of railway supplies was never more than one-fifth of the entire business of the house, and that this proportion has been materially lessened in both directions during the past year. The trade that has diminished with constructors and repairers of railroads has been more than balanced by gains in the trade with manufacturers and dealers in all parts of the northwest.

An East Saginaw dispatch, reports that the lumber business throughout the valley is becoming more brisk. There has been more lumber sold and shipped during this month than any other during the present season.

SEASONING LUMBER.

So many correspondents have written us in relation to the various methods of seasoning lumber that we are induced to give the manner of seasoning performed by the "Beach High Pressure Steam Seasoning Process," or at least as claimed by the advocates of that process:

"The nature of this invention consists in subjecting wood to the action of direct steam, so confined as to allow of a pressure, of about 30 lbs to the inch, striking every pore at the same instant with a high heat, and by the pressure forcing the heat almost immediately completely through the wood, thereby coagulating and retaining the albumen and mineral salts in the wood; thus partially filling each pore with an insoluble compound, the affinity of which for water has been entirely destroyed; and so rendering the wood more solid, tougher, less brittle, susceptible of a higher polish, and much less liable to be affected by atmospheric changes.

In order to perform this operation, the lumber is separated by lath strips, loaded upon a small car, run into an iron cylinder or tank, when the door is closed, properly secured, and steam admitted from a boiler, until it shows a pressure in the tank of about 50 lbs to the inch, which pressure should remain for a time, dependent upon the thickness and kind of wood treated—thin or soft wood not requiring so much time as thick or hard wood. Six or eight minutes are sufficient for pine of one inch in thickness, and ten to twelve minutes

for black walnut of same thickness. Thicker lumber should be treated proportionately longer.

When lumber has been treated in this manner, it is no longer green, but simply wet, and it needs only to be piled in the usual manner, in order to become dry and ready for use in a very short time. Thirty days in the yard, after this process, is more than equal to one year without it, on any kind or thickness of wood; and the treatment is as efficacious upon perfectly green as upon partially seasoned lumber.

The cost of tanks will vary in different localities, and licenses are allowed to buy them where they can do so at the best advantage; but the present cost delivered on cars or of a tank five feet in diameter by nineteen in length (giving a seasoning capacity of from twenty-five to forty thousand feet per day,) with track inside, three cars, cocks, globe valve and steam gauge, is about eleven hundred dollars.

The cost of operating will depend upon location, proper arrangement, cost of fuel, &c. When properly arranged, in a lumber region, the cost should be less than twenty-five cents, and in no case should it exceed seventy-five cents per thousand feet.

Green lumber, as is well-known, is that in which the natural sap of the wood exists, to a greater or less extent, in its normal state, and lumber is rated either entirely or partially seasoned when this natural sap has been evaporated and dried by a longer or shorter duration of exposure to the action of the atmosphere.

This change of condition, from a green state to that of seasoned and dry lumber, takes place very slowly under the action of the atmosphere, occupying years, even upon comparatively thin wood; while planks of some hard woods, of a thickness greater than four or five inches, it has heretofore been utterly impracticable to season thoroughly to the heart.

The sap of wood, to speak in general terms, is composed of two constituent parts, viz: solid and liquid. The principal ingredient of the solid constituent of the sap is albumen, and it is due to the presence of this substance that lumber seasons so slowly in the air; the albumen clinging with great tenacity to its moisture, and giving it up with great reluctance and very gradually. The action of the atmosphere in seasoning lumber consists, simply, in causing the evaporation of the liquid of the sap and the consequent drying and hardening in the cells and tissues of the wood of the albuminous and other solid portions; and as the sap oozes out, the water vaporizes while the albuminous substance solidifies at the orifice of each pore, until they become absolutely sealed up, thereby cutting off all further escape of the sap.

Hence it is that by dressing, partially seasoned lumber and thus re-opening the pores, rapid seasoning will be revived.

It is a well-known fact that albumen which is simply dried and hardened by evaporation has a very strong affinity for and will attract and absorb moisture with great avidity. In this

fact is found the chief cause of the universal swelling of lumber (no matter how well seasoned or dry it may be at the outset) whenever subjected to dampness and moisture. That this is a source of continual trouble and annoyance to all artificers in wood, need hardly be mentioned.

Many processes for seasoning lumber have been devised and put in operation, but have failed, either because the expense attending their operation has been too great; or because the fibre and quality of the lumber itself have been radically injured by undergoing the extreme of temperature involved.

From the foregoing the following facts are apparent:

To season lumber in the ordinary manner a long exposure to the action of the air is required.

Either air-seasoned or kiln-dried lumber readily absorbs moisture, and hence will swell and shrink.

Seasoning processes heretofore devised have proved both too expensive in operation, and injurious to the lumber.

MERITS OF THE BEACH PROCESS.

By the High Pressure applied, the steam is forced through every fibre, relaxing unequal tensions and providing for an equal and general shrinkage to the centre of the wood, thus avoiding the excessive checking arising from the kiln-drying or other surface heating, which causes rapid contraction without, and positive resistance and expansion by the imprisoned sap within.

It is a quick process. It has been demonstrated that lumber one inch in thickness, however green or wet,

is by it thoroughly seasoned in from ten to thirty days. Planks and timber of any thickness commonly used are as easy, although not so quickly, seasoned as thin boards.

Lumber seasoned by this process has less capacity to absorb moisture, because each pore of the wood has been left partially filled with albumen, which by the action of the steam has become coagulated, fixed and insoluble.

Practice has demonstrated that this lumber will not swell in a damp, or shrink in a dry air, to one-half the extent of any other lumber.

The process is not expensive. Lumber seasoned by this process, while so much superior in quality, will cost less than that produced by other methods, and by its use, dealers may keep on hand complete assortments of thoroughly seasoned lumber, with the use of only a comparatively small capital.

Lumber instead of being injured by this process is very greatly benefited by it. The "life" of the wood of the wood is preserved perfectly. Its fibre is unimpaired. It is less liable to check, become honeycombed, or "shaky." It is, also, rendered firmer, tougher, and less porous. Its surface is susceptible of taking a higher polish and a more elegant finish than can be produced upon air seasoned lumber.

This process does not kiln dry lumber. It is not analogous either in its method or effects to kiln-drying or the ordinary steam-drying processes. It produces in lumber no one of the many deleterious results occasioned by either of these modes of drying

lumber. It is a simple seasoning process, cooking the sap, liberating the water and so preparing the wood for rapid drying that even a hot air kiln will no longer injure it."

LUMBER MATTERS AT SAGINAW.

Lumber Shipped During Last Month and During the Season—Inspected Under the Law.

From the Saginaw Enterprise.

We have no new feature in the lumber market to note. Shipments during the past month show a great falling off, the shipments for July last being nearly eighteen million feet less than during the corresponding time last year. Notwithstanding this fact, the total shipments to August 1st are nearly five million feet in excess of the corresponding time last year. This is accounted for in the fact that the present season opened early, and the last season opened late. Below we give the shipments by water from the ports of East Saginaw and Bay City, during the month of July, as compared with last year :

EAST SAGINAW.

	July, 1873.	July, 1874.
Lumber.....	33,798,260	21,678,536
Lath.....	1,925,000	923,000
Shingles.....	3,250,000	4,722,000
Salt.....	1,700	7,420
Staves.....	463,000	153,000

There were also shipped last month 6,000 cubic feet of square timber, 177 cords of elm bolts and 400 tons of plaster.

BAY CITY.

	1873.	1874.
Lumber.....	52,069,621	45,804,066
Lath.....	4,699,000	4,478,000
Shingles.....	5,951,000	4,232,000
Salt.....	10,588	60,157
Staves.....	1,517,459	307,997
Hoops.....	1,760,000	1,030,000

FROM THE RIVER.

The following table shows the total shipments from the river from the opening of navigation until August 1st, during the years named :

	1872.	1873.	1874.
Lumber.....	209,937,493	258,914,254	263,812,133
Lath.....	13,324,380	14,752,500	21,577,740
Shingles.....	44,657,500	23,322,500	31,340,300
Salt.....	118,375	179,101	286,924
Staves.....	3,218,010	4,976,124	3,473,013

Sales made are mostly in small lots more largely for interior demand than formerly.

INSPECTED UNDER THE LAW.

The amount of lumber shipped from Bay City under the law during July was :

	Feet.
First clear.....	162,578
Second clear.....	132,873
Third clear.....	240,082
Three upper qualities.....	876,603
Common.....	11,104,071
Culls.....	2,030,030
Straight measure.....	375,236
Total.....	14,372,493

WHERE IT WENT.

To New York ports.....	9,767,013
To Ohio ports.....	2,684,318
To Illinois ports.....	1,436,993
To Pennsylvania ports.....	778,755
To Michigan ports.....	154,436
Total.....	14,872,493

The following were the commercial arrivals at the Saginaws for the years 1857 and 1858. The vast increase since that period is of remarkable magnitude. We find that they were as follows :

1857—Sail vessels.....	710
Steamers.....	123
Total.....	833
1858—Sail vessels.....	620
Steamers.....	92
Total.....	712

The imports of this port for 1857 were \$3,076,030; exports, \$1,589,030; 1858, imports, \$1,436,070, exports, \$4,414,800.

The commercial arrivals last year were over 2,000, 70 vessels and barges being engaged almost exclusively in the lumber carrying trade, with an aggregate tonnage of 17,000, and a carrying capacity of 18,000,000 feet of lumber. In addition to these there were some twenty vessels engaged in the oak timber trade. The shipments during the year aggregated 456,238,925 feet of lumber; 52,827,100 pieces of lath; 45,234,000 shingles; 45,234,060 bbls of salt, besides staves, hoops, oak timber, etc., etc., the value of which reached many millions.

LUMBERING IN CALIFORNIA.

I date my letter among the pines, 35 miles west of the summit of the Sierra Nevada, and 4000 feet above the sea. I have just been out to see them haul logs. All the logging in this country is done in the summer on wagons or "trucks." There are five yoke of oxen in each team, one teamster and one man to swamp and assist about loading. A large part of the men engaged in lumbering here are from Maine.

The axles of the trucks are of iron four inches square and eight feet long. Upon each axle a block of wood six inches wide, and coming to the tops of the wheels is bolted and clamped in the strongest possible manner. Upon these are placed the bunks, each eight feet long, and projecting over the wheels. The wheels are made of pine logs four feet in diameter, sawed into sections eighteen inches thick, and then hewn so as to be seven inches wide at the outer edge, where they are bound with heavy iron ties. These trucks are strong enough for a load of twenty tons in a rough place and cost from five to eight hundred dollars each. A sugar pine, that had calmly and proudly maintained its position upon the side of the mountain, for perhaps two thousand years, had been ruthlessly sawn down. What sacrilege! What a wanton attack upon things ancient and honorable! The seed of this tree was, perhaps, germinating when Virgil was writing the *Æneid*! It was six feet through at the stump, but only four logs, each sixteen feet long, were taken. All the lumber among the limbs is left to decay, and trees having limbs low down are not touched. We took the two middle logs and set the brake, which was so powerful that the hind trucks plowed their way down the mountain without turning.

On reaching the mill we found these two logs scaled 2958 feet, making the four logs from that single tree

scale about 6000 feet. One log on the mill brow, 20 feet long, scaled nearly 2200 feet.

The average of the whole lot at the mill at that time was about 1500 feet. No logs are hauled up hill. When all the lumber worth cutting standing in the valley above the mill and on the sides of the mountains sloping towards it, is manufactured, the mill is moved.

The yellow pines in these forests are as large as the sugar pines and as fine looking trees. They are much like the Norway pine in Maine. The timber is hard and excellent for flooring.

These trees are now generally passed by, but they will soon be wanted. Now only the best is taken—the cream of the forest. The two steam saw mills here, about a mile apart, are cutting out 70,000 feet of lumber daily, which is to be run down the Flume 37 miles to the railroad, and the largest and best part shipped to San Francisco. The owners will of course reap a rich harvest, but the poor men who work in the mills and are much out of employment five months in the year, who have to compete with Chinese labor, are no better off and less happy than the men in Maine who have less wages, less temptations and more steady employment. The lumber here is all cut by circular saws. There are two circular saws, each about five feet in diameter, one above the other.

The climate here at this elevation is most excellent. The air is cool and bracing, and the water cold and pure. One of our men who frequently bled at the lungs when in San Jose, is well and able to work here.—*Cor. of the Bangor Whig and Courier.*

A fire at Muskegon, Mich., August 1st, destroyed half the city. The lumber mills, of which there are many, escaped however.

GREENVILLE MANUFACTURING ESTABLISHMENTS.

Correspondence Grand Rapids (Mich.) Enterprise.

I hope our readers won't tire of reading about Greenville, for they can feel pretty well acquainted with it and its business men when this series is concluded. For the present I am through with all but the manufacturers, and now will conclude with them. The manufacturing interest of Greenville is already quite extensive, and is increasing constantly. I mentioned the excellent water power afforded by Flat River in a previous article, and now we will inspect the mills.

First in order comes Oliver, Belknap & Green's planing and re-sawing mill, located on the lower dam, the members of the firm being J. E. Oliver, J. W. Belknap and John Green. This mill is unquestionably one of the finest planing, scroll-sawing and lumber-dressing mills in Michigan, having two planers, one scroll machine, one shaper and altogether twenty-five machines. They employ forty-three hands here, and at their saw-mill, which is located seven miles north. The saw-mill has a capacity of 30,000 feet daily. The capital invested in the two mills is \$50,000. The Greenville mill has been run by Oliver & Belknap four years, Mr. Green having joined them but a few weeks since. Their annual shipments to southern markets will reach a large figure. Their power is furnished by a Lane & Bodley steam engine, of 40 horse power, with a 12x20 inch cylinder. This engine has been running under the efficient charge of W. L. Osborn for two years without five dollars worth of repairs. It runs the entire mill, and is one of the most untiring workers I have seen in some time. Alfred Mills, who runs one of the planers, deserves a special notice for the skill and industry with which he attends to his department.

Messrs. Fuller & Bracey's saw-mill is located near by, and has one

circular saw and a double shingle mill machine, the saw cutting 3,000,000 feet annually, and the shingle machine fifty thousand shingles daily. This mill was built six years ago, and the present proprietors have owned it four years. Before this article appears, however, the property will have passed into the hands of Mr. Joseph M. Fuller, Mr. Bracey going to Maryland. The capital invested in the business is \$15,000 and fifteen men are employed in and around the mill.

N. M. Cole is the proprietor of the Greenville woollen mills, which is an institution that city has that Grand Rapids cannot boast of, and Mr. Cole has done a good thing for the Greenville manufacturing interests by building it. It was built seven years since. He has a full set of manufacturing machines, and also one of custom cards. Here is made a fine quality of plain woolen goods, and they are supplying the yarn for the Grand Rapids sock factory. The capital invested is \$20,000, and twelve hands are employed. The wool is obtained from the surrounding country, where the sheep and wool interest is largely and constantly increasing.

A few steps from the woolen mills is George Partlow's flouring mills, having four run of stone, three running flour, and one feed. The capacity is from 150 to 200 barrels in twenty-four hours, a large portion of which is shipped to New York and Boston. The mill was built ten years ago, and the capital invested is \$35,000.

When I visited the mill Mr. Partlow was away, but it was doing its work faithfully under the competent supervision of H. C. Dutton, the worthy miller.

F. N. Wright & Co.'s saw mill is located just across the mill-race from Partlow's mill, and is one of the heavy mill firms. Mr. Wright did not seem particularly anxious to have me make any detailed statement of

his business, the reason I know not, and consequently I have to let this pass.

Maxted & Moors have the oldest foundry and machine shop north of Grand Rapids, it being twenty-two years old, when it was established by Coffren & Masted, who were together three years, when the Moor brothers bought Mr. Coffren's interest, and the firm has since been continued under the present style. There were then a few little saw mills on the river, and besides the work done for them, they made plows for the farmers, who were beginning to settle quite thickly around them. Their shops are located on the upper dam, and they use water power principally, but in case of lack of water are provided with steam, to enable them to run constantly. They have in all five lathes, a wood and an iron planer, a drill, and all other machines for a first-class machine shop. They still make plows and cultivators in addition to their mill work. They have \$20,000 capital.

When Mr. Maxted came here the mail was carried weekly by pony from Ionia, and the country was then thickly settled by the red-skins.

E. Middleton & Son's flouring mills is just across the river from the above-named establishments. They are called the Greenville City Mills, of which mention was made a recent article. They have now six run of stone, two additional ones having been put in. The capacity is from 250 to 300 barrels daily. One stone is run on feed. The original Greenville mills were built thirty years ago by Slaght & French, and sixteen years since was purchased by E. Middleton. Three years since, the present firm built the large mill they now occupy, than which the state of Michigan probably does not contain one of greater capacity, or arranged with such compactness or convenience, and the old mill stands a little to the right, vacant. The new mill is 40x68 feet, with office extra, and store-

houses and cooper shop in adjacent buildings. The capital invested is \$80,000, and the business will amount to upward of \$500,000 per annum. They own the power furnished by the upper dam. They are now making additional repairs and enlargements, which work is under the charge of Fred Ladd, one of the best millwrights in the entire west, recently from Minneapolis.

Wm. Winters has a carriage and wagon shop near the mill, and is prepared to make or repair carriages or wagons on short notice. He has been running three years, and is literally overrun with business, which is the species of complaint I like to hear made.

C. J. Cawley, carriage trimmer and painter, may be found over Winters' wagon shop. He has also been three years in business, and I can recommend him as a master of his work, if I may judge by what I saw of it. He is a young man, full of pluck and ambition, and if anything will carry him through, that will.

The new shingle mill of Messrs. Bartlett & Hewitt is now running in full blast, cutting 30,000 per day. They have the Challoner mill, made by George Challoner, Omro, Wis. It is a horizontal saw and can cut on full run 35,000 feet per day. The shingles are unusually even and perfect. A side-track is being laid from the main track of the railroad to accommodate this and Middleton's mills, also others in the immediate vicinity. This firm will ship principally to Cincinnati, Ohio. Beside the shingle saw they have a cutting off saw, a drag saw and a bolter.

W. P. Hall's planing mill forms one of the cluster of mills about the upper dam. It has a planer, a resawer, a scroll saw, two ripping and one cutting off saw, and all other machines pertaining to the business—also manufactures doors, sash and blinds. Mr. Hall is successor to J. P. Dodge and has been running the mill a year.

And now Henry Hart, with his saw mill and patent cars, has the honor of winding up this series for the present. Mr. Hart's is the largest water-power saw mill here, running a double circular saw and a gang edger. The mill has been built two years the coming fall. He has an extensive lumber yard nearly on the side-track before mentioned. The usual cutting of this mill is 25,000 feet in 11 hours. Henry is a genius. His carts and trucks are not like any one else's, they're Henry Hart's own contrivances and are the most handy of any I have ever seen. One truck that first attracted my attention I will describe. It is for running lumber out of the mill into the yards, and can be turned at right angles or any other angle almost, and runs on three wheels, the rear one being in the form of an immense castor, which answers for a rudder. This saves the building of tramways, tracks, etc., for it is just as easy, and much more convenient to handle. Henry also is a lover of fine horses, and has some of the finest stock in Greenville. The rivals in this are probably he and J. W. Belknap.

A CONVENTION OF YELLOW PINE MANUFACTURERS.

The yellow pine manufacturers and dealers have recently held a convention at Norfolk, Va., and are endeavoring to come to some agreement about curtailing the amount of yellow-pine lumber manufactured. The convention is reported as harmonious and united in expression. The following resolutions were passed:

Resolved, That, in view of the fact that yellow pine lumber cannot be sold at present, except at ruinous prices, owing to the fact that a supply, greatly in excess of the demand, has been and still is being shipped to market with instructions to sell and the price left to the discretion of the

commission merchant, it is therefore the sense of this convention that shipments should hereafter be made sparingly, until such a time as there shall be increased demand, and manufacturers now having lumber in market awaiting sale or shipping hereafter, instruct their commission merchants to make no sale of yellow pine lumber until it can be sold at a price, affording a living profit.

Resolved, That the chairman of this convention appoint a committee of three, whose duty it shall be to carefully prepare a plan, with suitable constitution and by-laws, for the organization of the yellow-pine manufacturers into a permanent association for the protection of that interest, to report at an adjourned meeting of this convention, to be held in Norfolk on the 3d of September, 1874.

Resolved, That the chairman appoint a committee of three to prepare a suitable circular, embracing the objects of the adjourned meeting of this convention, with statistics showing the present condition of the lumber market, and direct one to every manufacturer of yellow-pine lumber in Virginia, North Carolina and Maryland, asking their attendance and cooperation at the adjourned meeting.

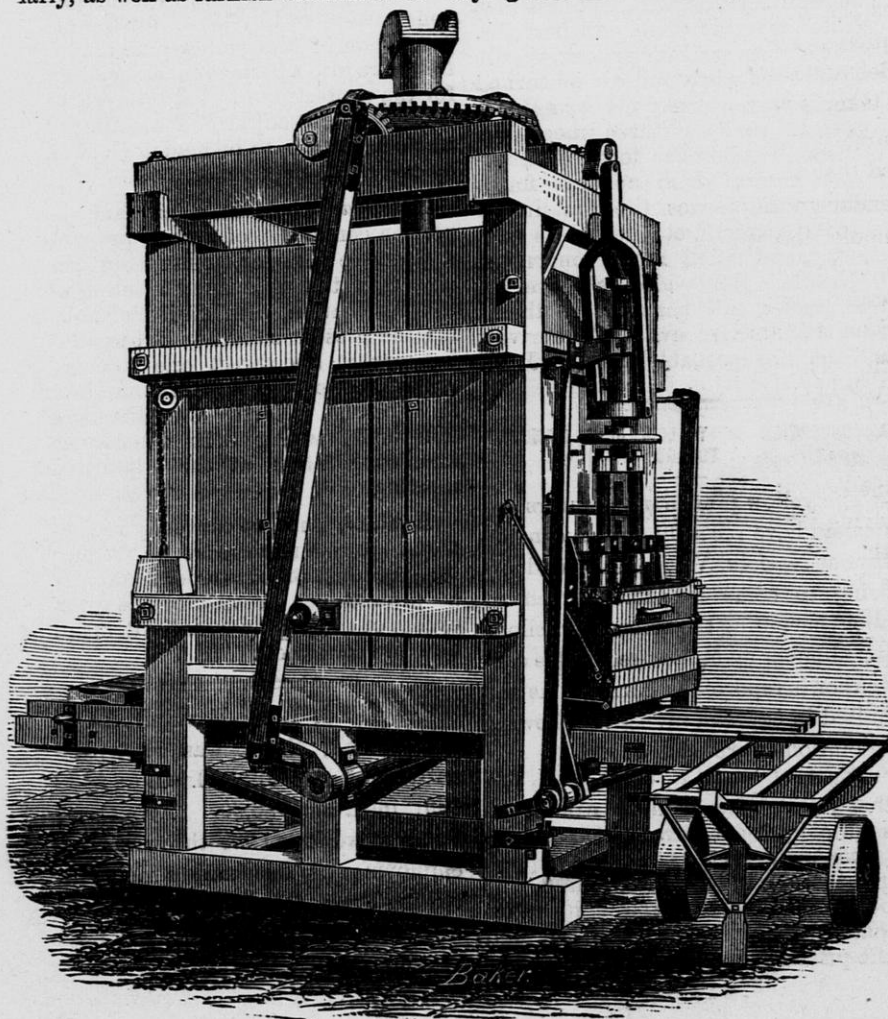
Resolved, That we earnestly recommend to manufacturers to reduce their production of lumber as rapidly as practicable, in view of the great excess of the supply over the demand now in the market.

The mill of Long, Barnhill & Co., at Portland, N. B., was wholly destroyed by fire July 30. Loss \$43,000; insurance \$6,000. About one hundred workmen are thrown out of employment. The mill which was cutting deals for the English market, produced on an average, from 70,000 to 80,000 feet per day.

THE MILWAUKEE BRICK MACHINE.

Milwaukee has long been famous for its superior quality of brick. Superiority of machinery is as necessary to successful brick making as it is in any other line of manufacture. Filer, Stowell & Co., Milwaukee, have recently purchased the right to manufacture the best brick machine in use, and will supply the states of Indiana, Ohio and Kentucky particularly, as well as furnish machines for

use in any other localities. Mr. Gurney, an experienced person, will do the business of selling and putting up these machines. One of these brick machines has just been placed in operation at Cleveland, Ohio, and is now making brick at the rate of 35,000 per day. The machine is made for either horse or steam power. All brickmakers who have used this machine are unanimous in saying it is the "best they ever saw."



Some of the advantages which this machine has over all others, we enumerate as follows :

First. It makes perfect and uniform brick, in size and quality, and will make 24,000 with one pair of horses, and 30,000 with steam power, per day, or as many as can be taken away from the machine.

Second. Two horses work it with ease.

Third. It grinds the clay fine and shoves the mould under the press-box, presses the clay into the moulds, and delivers them on the table ready to be taken away.

Fourth. The machine is so arranged that there is no possibility of the sander getting a mould caught ; the mould follower is moved back quick, and stops long enough to give the sander ample time to place his mould on the table.

Fifth. The pressure on the brick is made greater or less by simply turning a hand wheel. The press can be varied eight inches, and the machine can be kept grinding without moving the press.

Sixth. The pressure is retained on the brick, while the moulds are being pushed out on the table ; thus preventing the bricks from being drawn up in the moulds, as is the case with other machines.

Seventh. The machine cannot be injured by stones getting into it ; they pass out without stopping the machine or hindrance to the men. The moulds are placed on trucks and taken to the drying grounds by boys from 16 to 17 years old, with five moulds on a truck, each mould con-

taining six bricks, thus saving a great expense from the old method of carrying them off.

This machine has been thoroughly tested in the yards of George Burnham, Watkins & Co., and J. L. Burnham, Milwaukee, Wis.; D. J. Spaulding, Black River Falls, Wis.; Otto Vill, Winona, Minn.; Robertson & Curran, Dixon, Ill.; H. Westlake, Springfield, Ill.; E. Tangenberg, Stevens Point, Wis., and others.

Price of machine, four trucks, twenty-seven moulds, and the right to use the same, is one thousand dollars, loaded on cars or at steamboat dock in Milwaukee.

This machine requires but eight men to make 24,000, and ten men to make 30,000 brick per day, after the clay is put in the pit.

For full particulars and descriptive circulars, address FILER, STOWELL & Co., Milwaukee, Wis.

We add one testimonial of the value of this machine.

MILWAUKEE, July 7, 1874.

I am using on my yard six of the Milwaukee Brick Machines, which I have used seven years, and am making about thirty-two thousand brick per day to each machine, with six men and four boys, working not over eight hours per day. I have been in the brick business over thirty years, am making about ten million brick per year, and have tried probably more than twenty machines since I have been in the business. I am acquainted with the principal brick machines now in use, and consider this machine far superior to any other, both for quality of brick and cheapness of manufacturing the same.

GEORGE BURNHAM.

COMBINATION IN WOOD CUTTING-MACHINES.

Combination of functions, like automatic action, is often misapplied in machine construction, especially in machines for working wood; so long has wood work been performed by hand, and so recent has been the introduction of machines, that it is difficult to do away with the impression that machines are but an adjunct or auxiliary to hand labor, and that a machine which is capable of doing almost anything, and can be called in to assist when needed, is a good thing.

Without assuming that it is not proper and right in some places to have combined or universal machines, it must be maintained that the greatest amount of labor saving is effected by separating, rather than in combining, functions in this way. There is little saved except the framing, and perhaps a countershaft or two, while the capacity of each is impaired, often but one part being capable of being used at the same time.

There are only two sets of conditions that call for the combination of several functions in one machine for wood work; one, in the case of a very small shop, where *one man* can perform all the machine work; the other case, that of a very large shop, where one man can do the irregular jobs without disturbing the standard machines. In these two places, a machine that will saw, mould, tenon, mortise, etc., is a useful and proper machine, but for regular manufacturing purposes the object should rather be to separate than to combine them.

The large number of machines of this class made, especially in England, leads us to conclude that their sale is created to a large extent by the impression that the purchaser gets a number of machines condensed into one, and at a reduced cost.

The author was once called upon in America to examine and pass an opinion upon a machine which per-

formed all the various operations of making a carriage wheel. He recommended that it be placed in a carriage manufactory for experiment, where it performed in a perfect manner all that was claimed for it, but the inventor was astounded when the manufacturer told him that he should require at least *twenty-four* machines for his shop, or if he would separate it into some *eight* parts, *three* machines would answer the same purpose. In other words, if the inventor would undo what he had done, separate what he had combined, he would leave the art where he found it, without having added anything. Thousands of pounds in money and time are continually being spent by mistaking "combination" for "invention." The novelty of performing two or more things with the same agent is quite deceptive, and we are apt to mistake for useful that which is only novel.

The courts have done something to correct this idea of invention in combinations, by holding that one or more of the elements in a combination must be new, in order that it shall be subject-matter for a patent. Yet patents are continually being allowed in cases where all the elements are old, as they must of necessity be, unless consisting of new mechanical movements which are not likely to be developed by the class of inventors who patent combination machines.

A machine, that is arranged to do several different things, is generally supposed to do but one at a time, hence the more functions it has, the greater the proportion of that part or parts which are idle. Now machines to pay must not stand idle, they must run, run fast, and run continuously; they must have room in which to handle material, and not be encumbered with parts that have nothing to do with the portion at work.—*Richards' Wood-Working Machines.*

ALPENA LUMBER COMPANY.

**An Extensive and Prosperous Corporation—
The Company's Mill at Alpena, Mich, and
Yards at Cleveland, Ohio—Capacity of the
—Mill 13,000,000 Feet per Year—Storage
Capacity of Yards at Cleveland 5,000,000
Feet—Future Plans of the Company.**

The Cleveland, Ohio, *Commercial Review* gives an interesting descriptive account of the Alpena Lumber Company. We remember, with pleasure, meeting the gentlemen of the Alpena Lumber Company, at Cleveland, and can heartily endorse all that the *Commercial Review* says in the following article:

The Alpena Lumber Company is a comparatively recent organization, but the business it controls has been established for a number of years, and is one of the most extensive in connection with the lumber trade. On the first of February last the Alpena Lumber Company succeeded Geo. Prentiss & Co., as proprietor of an extensive saw mill, dock facilities, etc., at Alpena, Michigan, and an extensive tract of pine timber land in that state, the lumber business having been carried on by the retiring firm for about four years, with notable success. Immediately upon the company succeeding to the business, arrangements were effected for a material addition to the facilities and an expansion and enlargement in every direction. The mill at Alpena received the improvements and additions that were found necessary, and the company established an extensive yard in this city, and every condition was supplied necessary to enable the company to carry on the business, as expressed by one of its officers, "from the stump up." The facilities of the company at Alpena, are of the most complete character. The mill has a capacity of 13,000,000 feet of lumber per year, and is fitted with the very best machinery. The company are now building a large

dock that will enclose a boom extensive enough to accommodate 5,000,000 feet of logs, and which will be one of the finest booms on the shore. The company have made calculations for turning out about 8,000,000 feet of lumber the present season. In connection with the mill there is a clapboard manufactory, which produces 1,000,000 feet per year of four foot clapboards exclusively for the eastern market. It is in contemplation by the company to add a planing mill as soon as it can be practically done. The yards of the company in this city are located on the Flats, west of Seneca street and near the coal docks of the Cleveland, Columbus & Cincinnati railroad, the office occupied being that of the late firm of Wm. Hutchinson & Co. These yards are extensive, having room for the storage of 5,000,000 feet of lumber. The dock of the company here is 256 feet front by one 170 feet deep. Next season the company will own barges and tow, arrangements to this end being about perfected. The company own pine timber lands with a present available growth of 80,000,000 feet the finest in Michigan. It will thus be seen that the company has every facility at command for meeting all orders promptly, and the energy and enterprise thus far exhibited are an assurance of future success. At present the company has several contracts to fill, among them one with Charles B. Hathaway, of Philadelphia, for supplying the stringers for the Superior and Broadway street railroads, and one for the Southside street railroad, of this city, aggregating 406,000 feet.

The company has ample capital, and is composed of experienced and enterprising business men. The officers are as follows:

President—Geo. Prentiss, Detroit.

Vice President—Loren Prentiss, Cleveland.

Secretary and Treasurer—Perry Prentiss, Cleveland.

Manager—S. C. Prentiss, Cleveland.

The superintendent of the mills at Alpena is Mr. John G. Beekman, who has had a long experience in the business. Mr. O. Baker, for fourteen years connected with the lumber trade, and for five years the foreman of the yards of Sheldon & Co., of this city, is in the employment of this company as salesman.

From the facts herewith presented, our readers will readily conclude that the Alpena Lumber Company is a thoroughly substantial corporation, having everything at its command for the prosecution of its business, which must prove a very important gain to the mercantile interests of Cleveland.

NEW ERA IN THE LUMBER TRADE.

A few weeks since we expressed the opinion that the lumber trade was opening new channels to the injury of the older ones—that the railroads in opening up and developing the timber resources of the state, have inaugurated a new era in the lumber business that was not dreamed of a few years ago. The mills located along the F. & P. M. Railroad, and contiguous to good timber, are multiplying rapidly, and the shipment of lumber from these mills has increased from year to year until it has now reached a point of considerable magnitude. We hold that lumber can be manufactured much cheaper at these mills than at those put to the expense of drying logs for supply. An exchange took exceptions to these views, and stated that it was mere fallacy to suppose that lumber could be manufactured cheaper at interior mills than at those located on navigable streams. We see nothing fallacious about our argument. Let us look at the facts. The interior mills are in nearly all instances located in the very midst of good timber, which can be procured at all seasons of the year and at a

mere nominal cost; while the mills in the Saginaw Valley and on the west shore of Lake Michigan are put to a very large annual expense for their supply, and are subject to all the vagaries of the weather for this supply. One reason for the prosperity which attends the interior mills is, that the buyer and seller are brought into closer contact, and as they generally sell by the car-load to the consumer, they have none of the troubles with the commission men, so much complained of by the west shore and Saginaw manufacturers. And as to shipments by rail, it is well known that they are constantly increasing, and will in all probability continue to increase until the bulk of the lumber is carried off in this manner. On this point the same exchange says:

“The shipments of lumber by rail have very largely increased during the last two years in the Saginaw Valley, whether it was formerly the almost universal custom to ship by water. The change is owing to various causes which are likely to continue and even grow more potent. Rail transportation is lower on account of competition and the increased facilities possessed. In all cases where trans-shipment from vessel to rail is necessary, the all rail route is not usually more expensive than the route partially by water. The managers of railroads leading into the valley have stated that if they could have sufficient business in lumber transportation they could afford to do it at prices as favorable as ordinary rates by water and rail combined. The excessive amount of lake tonnage for lumber carrying in connection with the increased business of the railroads in this branch of business seems to account for the exceedingly depressed condition of lake freights this season. Certainly the low rates are not owing to any falling off in the amount of lumber shipments for the season up to this date.”

Thus we have a new era inaugurated in the lumber trade. A few years ago it was deemed a very ruinous policy to ship lumber by rail, and mills, located along railway lines, were not considered very valuable investments. Indeed, timbered land any great distance from good driving streams was not considered of great value, for the reason that water was deemed the only legitimate outlet for lumber; but the extension of railroads into the very heart of the timber resources of Michigan has gradually exploded this theory, and the signs of the times appear to indicate that the mills along railroads have not only the vantage ground for manufacture of lumber, but are in the early future to be placed upon the same footing in regard to facilities for shipment.—*Ewart Review*.

O. W. CLARK'S BARKING MACHINE.

From the Appleton Post.

Mr. O. W. Clark, the inventive genius of this city, has recently had a model of his barking machine perfected, which he has forwarded to Munn & Co., of New York to be sent from there to the department at Washington, for the purpose of securing a patent thereon. The model is indeed a model of skilled workmanship. It was manufactured at Morgan Merrill & Steele's foundry in this city, and is perfect in all of its parts. Indeed it will do the work of a large machine and with the same accuracy and neatness. In the course of a few weeks we shall be able to produce an illustration of this machine accompanied by a more detailed description.

Mr. Clark has spent a good deal of time and solid thought upon this invention and the result is satisfactory in the extreme. He has had it in operation in the Bradner, Smith & Co's. mills for the past six months or more, and it has even more than met his expectations. It should and

we trust will be a source of considerable revenue to its inventor.

THE TIMBER SUPPLY.

Facts and Arguments by J. Little of Montreal.

From the Montreal Gazette.

SIR,—I find in your issue of Saturday an article copied from the St. John, New Brunswick, *Telegraph*, on the subject of the timber supply, from which it appears that the Province, which has for so long a time furnished a large amount of the consumption in Great Britain and the United States, is about used up, the St. Croix being now the only source of supply, and it appears from that paper that the reason of its holding out so long is to be attributed to a large amount of the timber territory drained by that stream being in the hands of private parties, who, however, to meet the demand, have been recklessly sacrificing their property, reducing year by year the dimensions of the timber they get out, while one-third of the whole product is now of the very inferior and almost valueless description called hemlock. The pine is all used up, and it is evident but a few years will, serve to throw them out of competition with the province of Quebec in the matter of spruce.

Since I brought the timber question to the notice of the American public in the communications which have been published in the *Gazette* and the *Boston Lumber Trade*, I notice the question has been pretty extensively discussed by the American press, and, taking the alarm, a memorial was sent by the President to Congress, strongly urging the necessity of passing an Act providing for the preservation of their timber, and giving bonuses for tree planting—a measure which should have been adopted before the timber lands were

all grabbed up by Railway Corporations, speculators, &c.

I showed in those communications what has not since been successfully disputed in the discussion of the question, that the United States would use up all the pine timber they have east of the Rocky Mountains in from ten to twelve years, and that all our pine and spruce would not give them a full supply of their annual consumption for three years if called on to do so. And now, as serving farther to draw attention to the question, in hope that our lumbermen will take it into serious consideration, and realize the necessity and value of curtailing their operations, I would ask them to reflect on the position the United States would be placed in, and what the price of lumber must be in Canada when *it will require one-third more than the tonnage of all the sailing vessels of Europe and America combined to freight the present consumption of pine alone, and double the amount of tonnage of all Europe and America for the transportation of their present consumption of commercial woods of all kinds from the Pacific coast* if they be found in that quarter. Is it not evident from this view of the question, which is based on their own Congressional returns of the consumption, that the commercial woods of Canada will in a few years reach a value immensely beyond that of any other description of property we possess? And is it not utter folly for the owners of timber property to be continually, as it would appear, running a race with each other to see who will soonest come to the end of their supplies,—wasting their time, working hard, and sacrificing a material so valuable and indispensable without any advantage resulting to themselves or the home community, when half the labor and capital expended would enrich them all and doubly prolong the time of exhaustion of their stock in trade, which no amount of capital

and labor could for generations replace. So far as regards that invaluable wood, the white pine,—every tree of which will be worth as much within the next decade as black walnut is to-day,—the Ottawa lumbermen have the control in their own hand, and are able to govern the markets both of Britain and the Middle and Eastern States of America to their own advantage, if they will make the effort. Let them curtail the supplies by one-half, and they will secure a return of *ten* dollars for *one* of profit they now make, and those who hold timber and are able to preserve it from the axe will yet do better.

The question of timber exhaustion is met by some with the argument that iron will take its place to an extent sufficient to keep down its price; but facts are against this view of the question. Let any one travel through Great Britain, and he will neither see any room for improvement, or improvements to any appreciable extent going on; and yet that old and long finished up country consumes annually five millions of loads, or over twice as much as Canada consumes and transports to all countries—paying at the same time double what it sold at here, notwithstanding her abundance of coal, iron, and cheap labor skilled and unskilled, and she will continue to use timber as long as it is to be had, no matter at what cost; so far as regards the United States it must reach four times its present price before its place is supplied to any great extent by iron or any other product, for it is to them a material absolutely indispensable.

Sweden, which has hitherto been the great timber-supplying country of the north of Europe, finding the drain upon her resources so exhausting, has also taken the alarm, and within a few weeks back has passed an edict prohibiting the cutting of timber of smaller dimensions than ten inches in diameter, on the

public domain and all private lands, annulling at the same time all contracts made for timber on account of private parties prior to the passing of the act. As a large amount of their production consists in deals of from five to seven inches wide, this supply will be cut off, and the cost will be much enhanced in furnishing a large description which can only be found at great distances from the floating streams. It takes a hundred and twenty-five years to grow pine trees of ten inches in diameter in that country.

Russia reserves all the timber on the banks of her streams for four miles back, as a breakwater and reservoir to preserve the country from inundations; yet here her greatest wealth of timber is to be found. but the home and foreign supply must be drawn from beyond that distance. A Russia timber firm in London that owns the timber on a river and its tributaries in that country, which empties into the White Sea, as large as the Ottawa, informed me that they are now reduced to supplying themselves with timber of from six to ten inches in diameter, and that Russia has but little commercial timber available for the English market. Parties in Britain now look upon the north of Europe as pretty well "played out"; but they are quite sure Canada is yet one unbroken forest. One influential journal, the *London Standard*, after ransacking European timber sections and finding the supplies all but exhausted, turns its attention to Canada, and assures the British public that there need be no apprehension of a timber famine, as "we have a supply for the most exacting populations of the earth for centuries"; while we ourselves have calculated our supply as not sufficient for the United States alone for a period of three years. Another journal, the *Building News* of the same city, equally well informed on the subject, sets down our timber territory at

"nine hundred millions of acres, or twelve times the area of Great Britain, all told," and what is puzzling to them is that the supply is so enormous "and yet the material so dear in their market." This is the sort of information furnished the people of Great Britain, who are so deeply interested in the question of the timber supply, by some of their leading journals; but they will, however, wake up to its true position when they find the United States will be forced, at higher prices than are now paid in England, to secure all the timber we have, in order to supply the middle and eastern states, which, in five years' time, will be totally stripped of their pine, and pretty well through with their spruce timber, and will also be forced to compete with them for supplies in the north of Europe, and in India and Japan, which are pointed to by some English writers somewhat better posted on the subject, as sources from which in a few years hence supplies must be drawn.

I understand a meeting of those engaged in the lumber and timber trade in the Provinces of Ontario and Quebec is to take place some time in the fall at Ottawa to try and arrive at some means of curtailing the supplies—a very wise measure.

Yours truly,

J. LITTLE.

Montreal, June 13, 1874.

LUBRICANTS.

The friction of the parts in machinery frequently absorbs a large percentage of the power employed. Various lubricating materials are used to reduce this source of waste. When polished steel moves on steel, properly oiled, the friction is about one-fourth of its weight; on copper or lead, one-fifth; on brass, one-sixth. Metals have more friction when they move on metals of the same kind than when on different metals. In

wood rubbing upon wood, oil, grease or blacklead, properly applied, reduces the friction two-thirds. Lard, oil, tallow, soap, blacklead, French chalk, and combinations of these substances, are used in different trades.

Antifriction Grease.—1. One part of fine blacklead, ground perfectly smooth, with 4 parts of lard. 2. Dissolve about 50 lbs. of soda in 3 or 4 gallons of boiling water, then melt in a copper about 1 ½ cwt. of tallow or palm oil; after it has cooled a little, pour in gradually the soda, stirring it all the while till it cools. 3. For cooling necks of shafts, which may occasionally be found useful where the shafts are not of a proper length, or the bearings faulty; 16 lbs. tallow, dissolved in a vessel; 2 ¼ lbs. white sugar of lead. When the tallow is melted, but not boiling, put in the sugar of lead and let it dissolve. Then put in 3 lbs. of black antimony. Keep stirring the whole mass till cold.

Lubricating Composition for Heavy Axles.—In a small boiler dissolve from 56 lbs. to 60 lbs. of soda in about 3 gallons of water. In a 60 gallon boiler, melt tallow, and to it add lard oil, each in quantity, according to season. In summer weather, tallow 1 cwt. 3 qrs.; lard oil 1 cwt. 1 qr. In winter, tallow 1 cwt. 1 qr.; lard oil, 1 cwt. 3 qrs. In spring or autumn, tallow, 1 cwt 2 qrs.; lard oil, 1 cwt, 2 qrs. As soon as the mixture boils, put on the fire, and let the mixture cool down gradually, frequently stirring it while cooling. When reduced to blood heat, run it off through a sieve into the solution of soda, stirring it well, to ensure a perfect mixture of the ingredients.

Anti-attrition Paste.—Lard, 2 ½ lbs.; camphor, 1 oz.; blacklead, ½ lb.; rub the camphor in a mortar down into a paste, with a little of the lard; then add the rest of the lard, and the black-lead, and mix thoroughly.

A PROSPECTIVE VIEW OF THE TRADE.

The Condition of the Trade in the Immediate Future — Overproduction — Retrospective View—Fair Products for the Fall Trade.

What is to be the condition of the lumber trade in the immediate future, is a problem, the solution of which would be very acceptable just now. While it is a question concerning which there is considerable difference of opinion among manipulators, its final adjustment will be a matter depending almost entirely upon them. Really, the panic of last fall had little to do with creating the present depressed condition of this great trade. It is time to look facts squarely in the face and acknowledge that the present situation is more the result of a steady growth of the habit of overdoing everything among us, until the cause may be summed up now in one simple word—overproduction. Too much lumber is being made to be sold at remunerative prices. A retrospective glance at the trade of this city during the past twenty years, from the time of the first overstock of lumber noticeable, may enable us to draw therefrom some pertinent conclusions regarding the future.

In 1853 the lumber market of Chicago was a very small affair. There were then no railroads making it a large part of their business to carry lumber. Milwaukee and this city were then about on a par as markets. Trade was almost entirely local. Common lumber then sold for \$7 per M. Times were hard, a fact attributable to a failure in the crops of the northwest, particularly in wheat. The extension of the Illinois Central Railroad about 1854, permitting rail shipments to the interior, caused an advance to \$14 in 1855. It continued to improve until 1857, current price being about \$15; very little lumber was then sold by cargo. The business was done more by manufacturers without the aid of the commission dealers. Then came the great pan-

which shattered everything not composed of adamant material. Lumber speedily went to \$10, and by the following July, (1858) sold at the old level, \$7. The cause of its reaching this low figure, was large overstocks, light demand and great rivalry in the business. One prominent Manistee manufacturer, to set the ball rolling, hoisted a placard upon Lake street bridge offering lumber at \$7, which, of course, had the effect of settling the entire market to that figure at which it continued during that year. In the spring of 1859, \$8 was the opening price. Trade and prices improved steadily until the spring of 1861, when \$10 was the ruling figure. On the 16th of May, of that year, the well remembered "stump tail" money was thrown out by the banks, condemning \$11,000,000 of the circulating medium of this state and Wisconsin. The effect of this was fatally felt in the lumber trade. Prices were made upon a gold basis, \$6, to \$6.50 by cargo and \$8 retail. From this time trade "picked up" again, continuing to improve until the spring of 1863, when every branch of business began to feel the effect of war times. Cargo lumber opened that year at \$14, at which price it sold with only a variation of fifty cents or one dollar the whole season. The following spring it started at \$18, and advanced steadily until \$25 was realized in some instances on fair mixed cargoes. It was that season that the retail price went to \$30, and the lumberman's pocket was lined with gold. In 1865, the range was between \$16 and \$20. In '67, the season again opened with the price at \$18, but it soon fell to \$14. From this time to the event of the great fire of October, 1871, the trade was marked by nothing particularly important, being subject to slight fluctuations. Just previous to the fire, the price ruled about \$13 to \$13.50, immediately advancing to \$16 and \$17, as soon as resumed after that great calamity. During 1872, the price ranged be-

tween \$11.50 and \$13. It opened the following spring, with the first sales at \$13, but speedily went to \$11, \$10 and \$9.50. When the panic of last fall came on it settled to \$8.50, \$8, and some sales were made still lower:

During the flush times within the period we have thus briefly epitomized, men became wealthy in manufacturing or dealing in lumber. The natural development of the country was rapid. Money was plentiful and easy to obtain. An exceedingly high-pressure system was the one upon which every branch of our business was conducted. Every body became infected, in a measure, by the mania for speculation. Manufacturing industries multiplied rapidly. Saw mills were built without regard to number, or hardly, to cost. They were to the smaller ones which had formerly furnished the country's supply of lumber, as giants to pigmies. Pine lands seemed to be only earthly possessions worth having. In many cases every available dollar from the sale of the manufactured product, was invested in more lands from which future millions were to be cut. Men with limited capital borrowed all they could get and went for the pine regions. The "grand march" of progress and development thundered along in the van of mighty railway projects. The iron bands were laid into the heart of the great forests which had previously been counted as totally inaccessible. The small men with borrowed capital, anticipating the railroads, erected mills and had them in running order by the time the iron was laid over which their productions could be transported to distant markets. The railway men who only expected their roads would possibly become paying enterprises with "the growth of the country," were astonished with the immensity of the carrying trade thus suddenly developed, for which their limited transporting facilities were wholly inadequate. The car shops

were crowded to their utmost capacity to supply the required means of transportation.

We were going too fast and the reaction came, just as it has through all stages of the world's history, and doubtless, will in the ages to come.

The development of the country throughout these times created an enormous demand for building material, and its timber resources were opened up and the lumber trade developed in greater proportion than our requirements justified. The result is, we have too many mills. We make too much lumber. It means low prices to the consumer, to be sure. It also means demoralization, financially, to the producer. Aside from being objectionable on the score of being an unproductive vocation, such a course is both damaging and reprehensible as a reckless waste of one of nature's most beneficent gifts.

The present state of things, therefore, cannot be attributed to local causes beyond the control of the interested operators, as other depressions may have been, but to the fact that the business has been forced to a height of over production at which it must stop for recuperation, or sound the financial death knell to many of its manipulators. It is said that the small manufacturers, with their railroad mills, "Guerrillas" as they are sometimes termed, must be starved out by competition, must be made to give way before the aggregated capital of the mammoth establishments upon the great logging streams. This idea is a fallacy, shown in the fact that the trade is undergoing a decided change in the *modus operandi* by which it is conducted. Our Saginaw correspondent, in another column, forcibly presents this subject from a Saginaw point of view, but which is applicable as well to other localities. It is these same small operators who will be last to yield to the pressure of financial, or other trade disturbing circumstan-

ces. In support of this assertion may be adduced the circumstances surrounding, and under which many of these parties are doing business. It may be with capital borrowed from friends, neighbors, or some other available source, and relying upon prosperous times to enable its repayment. In this way the entire community surrounding the enterprise becomes to a considerable extent personally identified with it. Upon the success of the business depends the ability to pay old debts, or new ones contracted for current expenses. The creditors, then, are as deeply interested in it as the principal operator, and will more lenient than usual in cases of emergency. In case of failure, they are assured of almost nothing, whereas, if the struggling concern is enabled to tide over the "hard times" by their aid, there may be hopes of ultimately recovering the amount of their investments, when business revives. It is different with the large operators, who have such enormous capital invested in mammoth saw mills and immense tracts of pine lands. When, after a series of disastrous seasons in which millions of lumber are put upon the market by them at an actual loss, they are driven to the wall by financial embarrassments, they must pay or stop. There is only the one alternative. Thus, if the present state of things continues, if more lumber is put upon the market than the consumer will take at paying prices, the revulsion must come in the natural order of things. And in such an event the large operators will be the first to weaken. It will not do, either, to harbor a general impression that by the coming winter, each lumberman will profit by the bitter experience of the past two seasons and stay out of the woods. Experience proves that each one simply argues that his neighbor will heed the lesson while he will reap a profit, by getting in a full stock to be sold at high prices which he is certain will result

from the non-action of his competitors.

In other trades, both in wholesale and retail branches, operations for the month of June—speaking for this city—show an actual gain over the corresponding period last year. Buyers are said to have been more liberal than for twelve months past. Money is undoubtedly in freer circulation among the class who buy in small lots, than at any time since last September. With the prospects which are now so apparent for abundant crops throughout the entire country, it is more than probable that we are to enjoy a good fall trade. An increase in the different branches of retail trade exerts a powerful influence in restoring confidence among all classes, and it has already been predicted that if this activity in the retail trade continues during the summer, "the anniversary of the Jay Cooke failure will find money in as free and general circulation as at any time since the close of the war."

This line of reasoning does not apply to this city alone. From the great eastern marts, New York, Boston, etc., come substantially the same reports. That this will affect the lumber trade, other than in the way of an increased demand could not be asserted with confidence. We cannot have an advance in the price of certain grades of lumber while there are large quantities on hand and continually being made. The price of good lumber is not low now. There is a good demand for the upper qualities at paying figures. Our advices from the different distributing points along the Mississippi, and the large markets east, intimate an expectation of an active demand throughout the season for fall trade. A large amount of lumber is now being sold in this market, but at low, we might say, ruinous prices. There is too much low grade lumber on hand and constantly being shipped here to expect any material advance very soon. The only remedy for

this is in a cessation of shipments. Thus, we can only argue for the immediate future, an increase of sales with but little advance in prices.—*Northwestern Lumberman.*

THE TIMBER BUSINESS.

Please "Wait a Little" and see how it Comes Out.

—*Hudson Star Times.*

The Star & Times has exposed the ridiculousness of one of the phases of "Reform," in the appointment of an army of incompetent timber agents to forage off from the St. Croix land grant, and rob, in salaries and expenses, the State of money that ought to go into the treasury. Instead of appointing one man, as Governors Fairchild and Washburne did to look after trespassers. Governor Taylor has appointed—well we don't know how many, we can only call to mind, Wilson, and Bashford, and Drakely, and Angel, and Whittlesy, and Morse; and a few such deputies as Dresser, and Blanding, and Mears, and McDermiad; besides Glover, Atty. General of the Brigade—these are all we can think of just now.

The *True Republican* intimates that a large amount of trespass will be hunted up. It says:

It would seem that after all, the trouble with Hod Taylor and Abe Van Meter in regard to Gov. Taylor's timber agents, was because they were likely to find too many trespassers, and thus show by contrast the incompetence to put it most charitably, of Gov. Washburne's timber agency ring. Mr. Bashford and his assistants, on the St. Croix waters alone, are likely to realize more money from trespasses of last winter, than has turned over to the State Treasury in several previous years.

Will our little contemporary restrain its enthusiasm for a time?

There has been no money as yet paid into the State Treasury, while we surmise a very large amount has been drawn out. Supposing we just "wait a little," and see how this thing comes out. If the result shows beneficial to the State, we will aid our contemporary in giving it publicity, and shall ask if it is otherwise that that sheet join the Star & Times, in the *expose* we intend to make of of this monstrous farce.

TEAK.

Teak-wood, or *Indian Oak*, is the wood of the *Tectona grandis*, a species of the natural order of the *Verbenaceae* the indigenous name of which in the Ghauts of which it is a native, is Taik. It is one of the largest known trees, and from the properties of the wood it is one of the most interesting. It is found in extensive forest tracts in Java, Malabar, Ceylon, Siam, and the Barman territories. It has been introduced into the British Indian possessions, and has been extended to the West Indies, and some naturalists believe that it would thrive even beyond the tropics. It is by far the best of the timbers furnished to us by the East, and is specially adapted for carpentry. A kind of wood imported into England under the name of teak, brought from the west coast of that vast wooded continent, and sometimes called African Teak, ought not to be confounded with it. It belongs to the order *Euphorbiaceae*, and is quite an inter-tropical tree. Though yielding a useful wood for many purposes it wants a great many of the specific properties of Indian oak.

Teak-wood is as strong as oak, but more buoyant; it is not only as durable, but more uniformly to be depended on for its durability. It can endure all climates and all alterations of climate. It can be used, too, when almost green, freshly cut, in fact, from the forest without seasoning or preparation. It is evenly

seasoned and shrinks only in an almost imperceptible degree. It is porous but strong, and while it is easily worked is remarkably lasting. Being of an oily nature it takes the nail well. It scarcely injures iron, and iron injures it but little. It is an invaluable tree for marine purposes, and as a ship timber, is in high favor in Calcutta and Madras, where the wood is consequently in considerable demand. It is also extensively employed in the construction of Eastern temples, and even in the raising of houses. The tree is singular in its style of growth. The young branches are square and jointed; the leaves are placed opposite each other, are obovate in shape and are downy on the lower side. They are inclined to droop, and are even on young trees from one to two feet in length, and from eight to eighteen inches in breadth. Its flowers which are set in wide-spreading panicles, are small, white, and perfume-yielding. It has a tomentose calyx, and the corolla is only slightly longer than the calyx. The fruit is a single-seeded drupe, having a soft outer coat round the endocarpium or stone. Its leaves furnish a fine brilliant purple dye, which is employed to impart their striking gaudy hues to the silks and cottons of the East.

The extensive forests of Pegu are enriched by this splendid timber tree, and its valuable wood grows in great abundance throughout Burmah. Burmese and Siamese teak, though not so close-grained or durable as some other growths, is more buoyant, and is therefore much used for masts and spars. The Burmese teak is more readily conveyed to the ports than some others, and therefore Rangoon and Moulmein teak is the most abundant and the cheapest as much from the facility of gaining supply as for its supposed inferiority to the teak-timber of Java and Malabar. The port of Rangoon, either for its own use in shipbuilding or for exportation to Calcutta, Mad-

ras, &c., receives about ten thousand trees per. annum. These used formerly to be sent in the shape called by Indian shipbuilders *shubin*—i. e. planks hewn out of the log with the adze, but since the introduction of saw-mills by European settlers a more economical method of plank-production is practised, and the value of the timber in each tree is enhanced by the improved machinery employed in cutting it into serviceable portions.

While Rangoon teak is greatly used in Calcutta and Malras, on account of the facility with which Burmah absorbs British and Indian cotton goods in exchange for this specially valuable product of its upland forests, Malabar teak is the timber most extensively used in the building-yards of Bombay. Malabar teak is reckoned the best of all. It is closest in fibre and heaviest in proportion to its bulk; it contains the greatest quantity of oil, and is the most durable. Instances are on record of ships built of it having undergone the wear and tear of eighty years, and some even have gone through a century of usefulness in the course of their history. They may be regarded as practically indestructible by ordinary use. From its great solidity and consequent heaviness, however, ships are seldom wholly built of this timber. It is seldom or never used for upper works or spars. The keel, the timbers, and such portions of the ship as are under water are built of it, and the rest of ligete. timber. In Calcutta, again, the framework and timbers are usually made of mature timber, and the deck and planking are made of teak. Java teak is regarded as highly valuable for planking. Ships which are entirely built of teak are found to be clumsy and unwieldy, though it is probable that this arises rather from defects in construction than in anything really objectionable in the nature of the timber itself, which seems to

have every quality of workableness that a wood should have, at the same time that other properties are highly in its favor.

Teak is never found growing in low alluvial lands. It avoids anywhere that the tide can rise to or reach. Its *habitat* is the high upland beyond the influence of the sea. That which grows on the high tablelands of Southern India is most highly esteemed. In the territory of Martaban there are extensive forests which are cut down by British settlers, especially for exportation. There is a teak-wood of Australia (*Endiandra glauca*) which is a noble tree, yielding a hard timber. The duramen of it is dark in color, fine and close in texture; it gives forth a pleasing, powerful aromatic fragrance is said to be very durable, and is regarded as a very valuable timber. It has attracted the attention of the building trade.

It is of high importance that a great commercial and manufacturing nation should have access not only to a large variety of woods applicable to specific uses, but especially that it should have abundant supplies of the best of each in its own kind, and for the purpose in which it is to be employed. It is also of importance that a knowledge of the localities and the qualities and the specific uses of different woods should be as largely as possible—diffused among all who are engaged in the timber trades. These few notes may not communicate much to experts, but they may be useful and interesting to others; and in the hope that they may be so they have been penned.—*Timber Trades Journal, London.*

Examine the "Lumbermen's Register" at the end of this volume and report additions or corrections to the WISCONSIN LUMBERMAN PUBLISHING CO. 64 Oneida street, Milwaukee, Wis.

PROSPECTS OF THE FALL TRADE.

Gentlemen, connected with mercantile agencies and in other positions favorable to an intelligent estimate of the present financial condition and the future business prospects of the country, speak with equal confidence as to the favorable aspect of affairs in both these respects. It is stated, as a fact both surprising and gratifying, that, within the past six months, there have absolutely been fewer failures in number, and certainly fewer in prominence, than for the same period in the average of years. On the contrary they have observed a very remarkable reduction of indebtedness in all classes and in almost all sections of the country.

It is said also that the mercantile indebtedness in the country is not more than two-thirds what it was at this time last year. The caution thus evinced is one of the chief causes of a restricted business and a hampered trade. The fright that the debtor class received in September has had its effect, and the very prominence of the failures that immediately followed impressed deeply a lesson that has been heeded.

The dullness of business has made many traders poorer than they were six months ago. In certain departments, such as railroad construction, iron making, and building operations, the demands of the time have been anticipated, and business for the present remains dull, but it is argued on all hands, that all the indications, which in former years would be taken as a basis for the hope of a good fall trade, are presented now. An unusually abundant crop of almost every production is promised in almost all sections of the country. Prices for these products are maintained at remunerative figures, and the steady gain in the value of our exports which the past six months has shown, is almost certain of repetition in the next half year.

It is true that similar predictions,

made last winter in reference to the trade of this spring, and summer, have not been verified. Much of this untatisfactory result is unquestionably due to the fact that during the most of the time, congress has been at work in reference to the financial interests of the country, and, with the uncertainty as to what policy would be adopted and as to the result of any proposed policy on the business of the country, business men have hesitated to engage in any new enterprises. In the absence of this paralyzing influence of congressional discussion and action or inaction, and with the favorable circumstances, to which we have adverted, we may certainly hope for a prosperous fall trade in nearly all departments of business.—*Boston Lumber Trade.*

INSPECTION.

The work entrusted to the two committees, appointed at the Williamsport Convention, to recommend rules for the uniform inspection, measurement and classification of lumber, one for white pine and one for yellow, will be one of great labor, and not of immediate accomplishment. We have several times during the past year adverted to the fact, that while the importance of uniform terms, rules, and practice of inspection is acknowledged and perhaps fully appreciated, there is, at the different points of manufacture and distribution a very great discrepancy both of usage and of terms. It is sufficiently easy to account for this in the circumstances under which the trade has grown up at its different centres. These have been brought together by the greatly increased facilities of transportation, but for many years they were comparatively isolated; terms and rules in the different lumber regions were in some degree peculiar to each of them. A glance only over our reports of the markets, embracing as they do, every important

point in that trade from Ottawa to Florida, and from St. John to San Francisco, will suggest this fact. We were more than ever impressed with it, as we endeavored, for the purpose of illustrating our statement on this point, to collate the present in some sort of table or other form, the various terms, applied at different points to the same quality of lumber, and found that we could not satisfy ourselves as to what terms corresponded throughout to each other in the various tables. We might do so with a tolerable assurance of accuracy on some points, but as to others we were wholly "at sea."

We have said that this work of reducing to system and uniformity would be difficult and not of immediate accomplishment. Should it be performed with entire thoroughness and to the satisfaction of the trade it will only after a long period, be universally accepted and used. It can only be effected by the hearty co-operation of the trade throughout the country. The committee will, we are assured be pleased to receive copies of any printed documents such as the laws of any state, the regulations of any district or association, having a bearing in this subject. Suggestions also from gentlemen, connected with the trade in any part of the country, may very essentially aid them in their important and difficult work. Communications on this subject may be addressed to the chairman of the committee, P. B. Merrill, Esq., of Messrs. N. Shaw & Co., Williamsport, Pa.—*Boston Lumber Trade.*

TIMBER TRADE OF MARSEILLES.—During the year 1872, the Adriatic supplied Marseilles with 6,000,000 staves; the United States with 125,000; and the Black Sea with about 100,000, principally Odessa and Poti. In the same year, 9,000 loads of timber and 6,000 planks were received from the Adriatic. The Baltic supplied

50,000 dozen of planks and deals; Canada sent 6,000 deals and 500 loads of oak timber; 250 loads of pitch pine from Florida were also imported.

BURL WALNUT.

Burl, or French walnut is noted and prized for its variety of fine figures and its hard, fine grain, or, perhaps, more properly speaking, its absence of grain. In these qualities it is superior to rosewood or mahogany, and the wood itself is susceptible to a high degree of polish, requiring a comparatively short space of time only for manipulation. This wood, too, is remarkable for its beauty, and it would be difficult to find two veneers alike in figure or color unless cut from the same block, and even then there would be perceptible marks of difference. This very beauty should tend to make the wood choice, but in America the demand for it is so great that it is used unsparingly on every article of furniture from the cheapest bedstead to the costliest cabinet. It would be useless to urge economy in its application in that country where a piece valued at twenty-five cents placed on an eight or ten dollar bedstead will yield an extra two dollars, but it does seem a pity that this fine wood should be wasted on cheap work.

Four or five years ago burl walnut was a rarity used only on fine work, and then in moderate quantity only; hence it was duly appreciated. Now fine work is covered with it, and cheap work has patches of it here and there without regard to design or meaning. If it must be used indiscriminately, let it by all means be put on tasty panels that have a significance. The manner in which panels are finished on some cheap work is truly horrible. The grains are imperfectly filled without any rubbing down, and then covered with a coat of cheap shellac. Frames for

parlor work, bookcases, desks, tables, and other articles of furniture in endless variety in New York are crowded with this wood to such an extent that it is to be feared people will tire of seeing it, and thus will be lost to the American trade the use of one of the prettiest woods on the cabinet-maker's list.—*Exchange.*

THE TIMBER SUPPLY.

From the Montreal Gazette.

Under this heading, we are, in another column, presented with a communication from Mr. James Little, having reference to one of the most important questions now calling for the attention of this country. To many, doubtless, his statements will appear startling, and be rejected as unworthy of credence. But the extensive research and experience of the writer, seem to be so thoroughly confirmed by many of our most prominent lumber operators, that we are prepared to more readily accept his views upon the question, than of any one of the numerous contributors to American publications who have vainly endeavored to refute his previously expressed opinions. We who live in the active commercial centres of Canada, and are accustomed to seeing millions of feet of timber annually passing our doors, brought from our inland forests and shipped on to the New England, South American, and European markets, apparently forget to think that there can ever be a limit to the supply whence all this is now obtained. We point away to the Ottawa and the St. Maurice, or proudly boast of the untold wealth of merchantable forest-property yet to be made subject to the woodman's axe in the vast unsettled new territory of the Northwest. But we seem blinded to or ignorant of the fact, that *all* the forest growth of Canada is not suitable for commercial purposes; and it

is only when some such unexpected but forcible truths as are set forth by our correspondent come upon us, that we are suddenly led to realize that amidst the vast area of country now covered with trees, the proportion of pine and spruce (the really valuable and available mercantile woods) is actually of such limited extent, as to threaten us with the prospect of entire denudation in a remarkably short space of time. Surely this is enough to arrest the hands of those who have hitherto cut into our timber lands with incomprehensible recklessness. If it be true that the Americans have been reducing their forests so prodigally, that their is every indication they will be bereft of every foot of timber east of the Rocky Mountains within ten or twelve years, how much more should not we who would then be called on to entirely supply them,—as we do partially now—be careful to conserve our pine and spruce supply, when we are informed that our production could not provide to the Americans for their annual consumption a full supply for three years. By all means the suggestion is a good one: that Canadian lumbermen should curtail their supplies by one-half. Be content with less immediate gain, in the sure prospect of vastly greater profit in the future, no longer try to run a race with our southern neighbors in reducing forests, but rather regard the timber growth as a patrimony worthy of strict conservation, resting assured of ultimate personal and national pecuniary benefit. We cordially commend the utterances of our correspondent to all who have any connection with the timber trade of Canada. It is also to be hoped that the proposed meeting, mentioned in the last paragraph of the communication, will be held, and that some practical suggestions may be elicited and acted upon.

Advertise in the LUMBERMAN.

BEECH.

This is a tree of a very large size, frequently being as large as the oak, ash and chestnut. When growing close together it runs up to a great height, with a clean, straight stem, the lower branches either dying gradually off, or so much checked in their growth as not to interfere with the cleanness of the timber. The bark, even upon the oldest trees is thin and smooth, and, when fully exposed to the light, of a pearl or silvery grey color.

It grows but slowly after the first few years of planting, but once rooted it makes rapid progress, and in about eighty years has attained maturity, and is found from 70 ft. to even 100 feet in height, and from 12 ft. to 16 ft. in circumference, but the highest figures used must be taken as representing extreme cases. The beech is one of the four aboriginal trees of this country, if our oldest writers on arboriculture are to be depended upon. It flourishes best in the central districts of England, favoring a chalky soil. It is not indigenous to Scotland and Ireland. In Scotland it is supposed to have been first planted about A. D. 1540 or 1560 and in Ireland its introduction is supposed to have taken place about the same time. In both these countries, where the soil is congenial, it arrives at as great perfection, and attains as great a size as it does in England. See "Statistics of the Beech" in the "Arboretum Britannicum," from which much valuable information may be extracted.

Its distribution throughout the temperate parts of Europe is extensive, and it reaches as far north in Norway as 59 degrees, and in Sweden to 58 degrees. It is found as well in Asia Minor, Palestine, and other Asiatic districts. In consulting various authorities respecting not only beech, but almost every other

wood, it cannot but be observed that almost too much prominence is given to the beauty of the tree, and too little to its utility. It certainly seems to be a most ungracious act to look at a majestic tree, merely with a view to felling it and handing it over to the sawyers, but as this journal only deals with wood so far as it ministers to the wants of trade, there is no space to spare to dwell on beauties of foliage and shape, however striking these may be.

The wood of the beech (according to an authority, which experience shows to be a correct one) in a green state is hard and brittle, neither its lateral nor its longitudinal adhesion being equal to that of oak, ash or elm. When dry, it weighs about fifty pounds to the cubic foot. It possesses a heart, as well as a sapwood, but the line of separation is not so visible as it is in the oak and many other trees, where the heartwood is always of a deeper color than the exterior or sapwood. In color it varies from a pale brown to white, the darkest color being considered superior in quality, and the produce of the finest trees and best soil. Submerged or kept constantly wet, it is very durable for waterworks, as well as for the keels and plankings of vessels, for which the straight clean boles of trees that have been drawn up in company are well adapted. If exposed alternately to a wet and dry atmosphere it soon rots, and the same may be said of many other descriptions of wood, and when kept dry it is very likely to be worm-eaten. If made into furniture, however, varnish or some similar treatment protects it. Much of the cheap English furniture, which is stained to resemble more costly woods, is made of beech, and is also used for panels for carriages, and for many purposes in joinery and turnery, such as planes, screws, and wooden shovels. Common fowling-pieces and muskets are also stocked with it.—*London Furniture Gazette.*

SHAKY LUMBER.

MR. EDITOR:—If the question, as to the cause of lumber being shaky, was put to one hundred men, probably nine-tenths, if not ninety-nine hundredths, of them would say it was caused by the wind swaying the trees when frozen. This answer or reason seems so plausible, that but few give the matter more thought. All lament the fact that lumber is shaky, but take no pains to investigate the matter, and to inquire if that answer is correct or not. Having given the subject much thought, I have arrived at a different conclusion; I am satisfied that the wind has nothing to do with it. Shaky timber never grows in places particularly exposed to the wind, and the heart of white pine never freezes unless it is shaky. It usually grows on low, wet, cold land, and if found on a high land, it is in or on some depression or valley, that is undrained on that high land. If the land on which shaky timber grows is cleared up, and sown to grasses, the spot on which the shaky timber stood, will grow a wild grass, and until it is drained, cannot be made to produce any other. Now my theory is, that there is a substance that is soluble in water, in the cold, wet places where the timber grows and it is taken up in the sap of the tree, being a little heavier than the sap, it is left in the grain of the wood, and coats it over, and this coating is so smooth that it prevents the grains of wood from adhering to each other. As proof that this soluble solution is heavier than the sap, we always find the butt of the tree shaky, if any part, and never the top. As proof of the coating of the grains of wood, those grains that are shaky, as we call it, will not rot; after shaky pines has all fallen to pieces, as it were, they grains themselves, are found perfectly sound and bright, showing that this coating is impervious to water, and the fact that it takes three

or four times as long to season or dry shaky lumber than it does sound lumber, this shows to us that this coating prevents the sap leaving the wood. The above are the reasons for my theory. What this substance is I am not enough of a chemist to tell. I have no doubt if one would burn some shaky timber, and analyze the ashes, he could tell us all about it. What would be of more value to the public would be to find a remedy. If it is the same substance, as my theory holds, as the one that causes the wild grass, no doubt draining would be a remedy, if it was done before the trees grew, but that will not help the grown timber. I submit this, hoping that it will attract the attention of some one that can tell us more about it. CANADA.

—*Boston Lumber Trade.*

**THE WILLIAMSPORT MANUFACTURERS AND THE
WOODBURY CLAIM.**

At the close of the recent national convention of lumbermen at Williamsport, a meeting of the planing-mill owners of that city was called by J. T. Drew, Esq., of the counsel of the executive committee of planing-mill owners, for the purpose of bringing before them the matter of the demand of Joseph P. Woodbury, and those associated with him in the ownership of his patent, for a royalty on all planing and moulding machines, using the "pressure bars" claimed to be covered by said patent. Mr. Drew explained to the gentlemen present the effect of the sustainment by the courts of the validity of the Woodbury Patent, and the consequent enforcement of the demand of the claims of the Woodbury Patent Planing Machine Company, and the importance to each of them of uniting in the organized effort, now being made by more than a thousand leading firms throughout the country in combination, to resist the claim. The assurance was given that

the manufacturers of Williamsport might be depended on for co-operation with, and financial support of, the combination.—*Boston Lumber Trade.*

LUMBERING IN MAINE.

From Editorial Correspondence of the Montreal (Canada) Gazette.

Bangor is a place of considerable importance, which it owes chiefly to the lumbering interest which centres there. There are several large saw mills in its vicinity, and others are studded at intervals along the banks of the Penobscott river, between Bangor and the Province line. What, however, strikes all, as at different intervals we catch glimpses from the train of the mill ponds, is the character of the logs which are being cut up into lumber. As a general rule, they are spruce logs, from five to fifteen inches at the butt, but not averaging on the whole more than about six or seven inches. Here and there a pine log or a small pond of them carefully boomed in, afford the evidences of the departed relics of the forest. Even these are small logs compared with what is the average class about a mill on the Ottawa or the Trent. The truth is that the lumber of Maine is well nigh exhausted, the victim to that most reckless system of waste which has everywhere on this continent characterised this industry. The Bangor paper which we got on the train had a letter from California describing lumbering operations near the Sierra Nevada, and there the inevitable madness crops out. Describing the magnificance of the forest trees, four logs from a single tree scaling six thousand feet of lumber, the average of a lot of logs at one of the mills being fifteen hundred feet, the writer proceeds to refer to the yellow pines in those forests, resembling the Norway pine in Maine, the timber being hard and excellent for flooring. And then comes the old, old story: "These trees are gen-

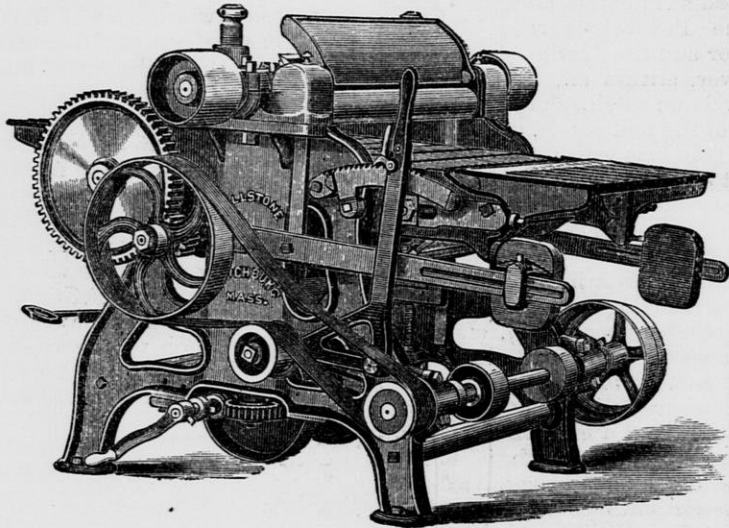
erally passed by, but they will soon be wanted. Now only the best is taken—the cream of the forest." Happy will it be for the lumber interests if when they are wanted they are still to be had, for it would be no unusual experience, judging from the record in Maine and Canada, to find that the fire had run through the partially cleared forest, and swept away the now despised timbers. It would not be easy to estimate in dollars the loss which this culling system has produced in Canada; and the scurvy apologies for saw logs which now fill the mill-ponds in the rivers of Maine are the warning voice to Canadian lumberers of a day fast approaching, and not, I fear, very far off, when a similar experience will be theirs. The present depression in the lumber interest affords a fair opportunity for a pause in the career of our production, and for stock-taking in relation to the real interests of the trade. I believe there is to be a meeting of lumberers next week in Ottawa to consider the position of the trade, and it is most sincerely to be hoped that wise counsels will govern its deliberations.

J. W. Bashford, timber agent for the state of Wisconsin, is meeting with commendable success in settlement for trespass on the St. Croix and Lake Superior landgrant. There are now about fourteen million feet of logs in the boom here, which have been cut on these lands. Lumbermen who have committed trespass on these lands now have an opportunity to make arrangements to retain possession of their logs until such time as they can be put in proper shape for sale or shipment. Wisconsin will doubtless realize more by this arrangement than any other which could be adopted.—*St. Paul Press.*

WOOD-WORKING MACHINERY.

In illustrating different machinery in the WISCONSIN LUMBERMAN it is our endeavor to produce accurate representations of first-class machines only, and refer our patrons to first-class houses. The machines illustrated in this article may best be secured through the house of O. L. Packard, 103 West Water street, Milwaukee. The first representation is of a

Shingle Machine with improved taper works. As now made it is regarded as the very best One Block Hand-Feed Shingle Machine in use. It has a self-tilting table, so the operator need not use his left hand, save to move the carriage. Any desired thickness of shingle can be made, both butt and top, and the taper or thickness can be adjusted in one minute's time. The saw is adjusted by means of set screws at top and

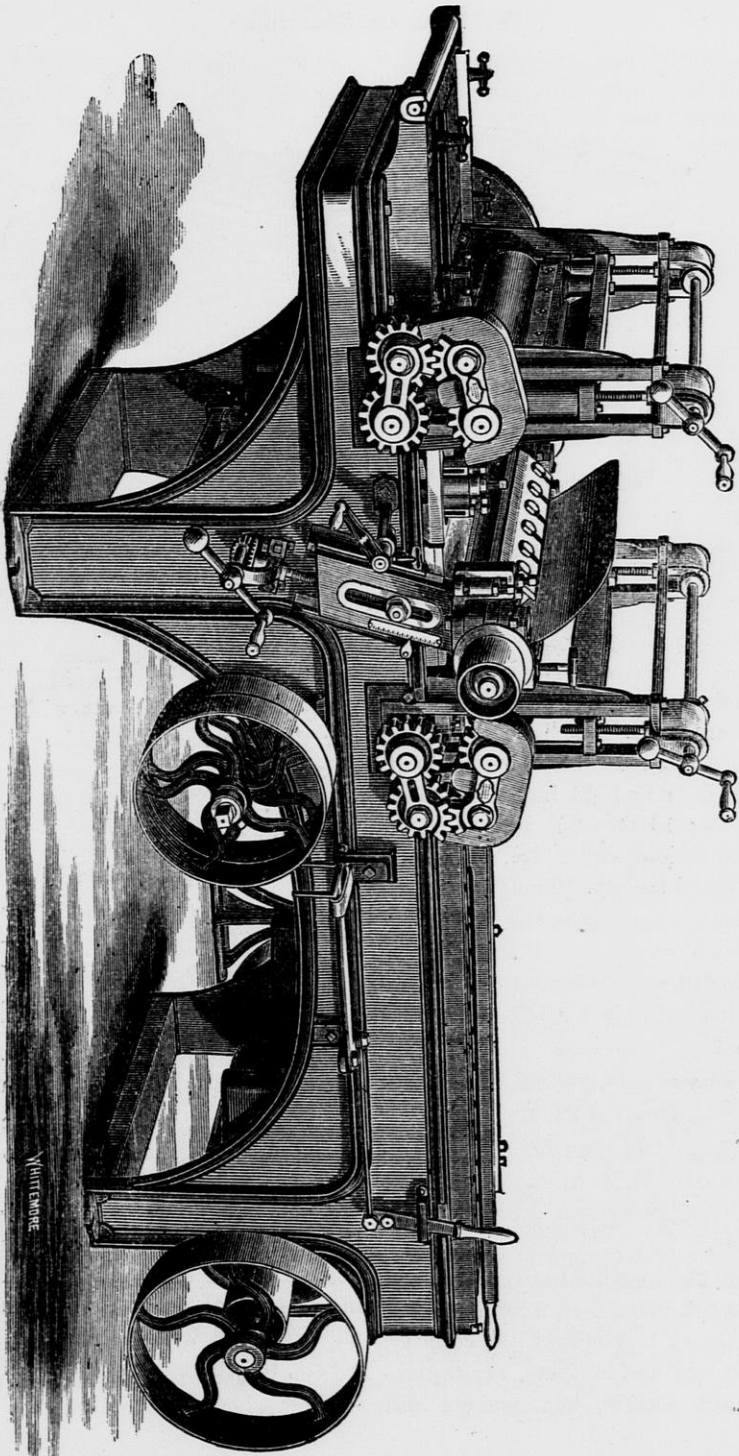


surface planer, made in several sizes, to plane from 18 to 30 inches in width and from 4 to 8 inches in thickness, either single or double surface. The peculiar merits of this machine may be mentioned in the facts that it has weighted pressure rolls, three knife SOLID STEEL CYLINDER, with self-oiling cylinder boxes, and ADJUSTS THICKNESS BY POWER. Its speed in planing is from 2,000 to 4,000 feet per hour.

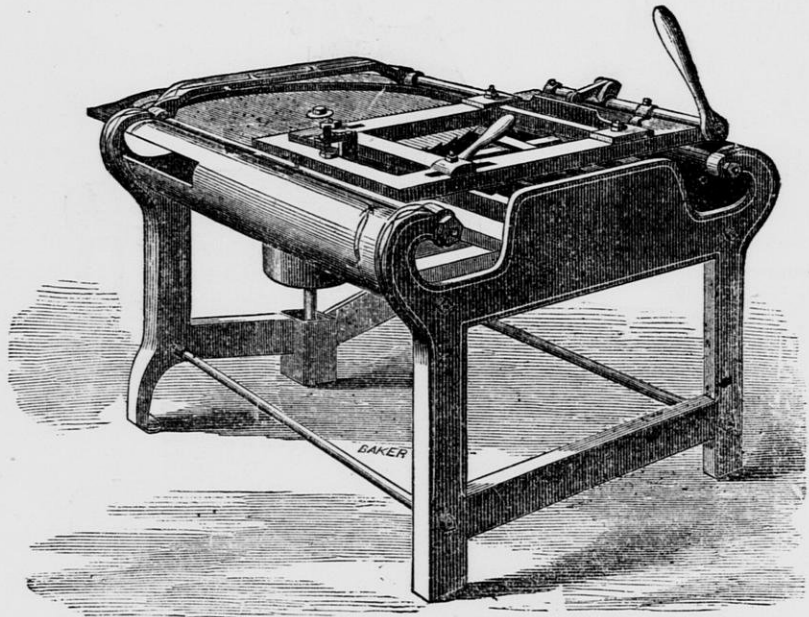
The second illustration represents EVARTS SHINGLE AND HEADING MACHINE. This is the original Evarts Patent

bottom boxes. It has an advantage over other Machines in its adaptation to the sawing of Tight Barrel Headings Thick at the Sap Edge and Thin at the Heart.

The working capacity of this machine is 30,000 to 40,000 shingles per day from green logs of white pine or cypress, and in yellow pine 12,000 to 15,000 per day, depending on the skill of the operator. Variations from these figures may occur from attendant circumstances, and not due to the Machine, which has had the



WHITEHORE



test of years. Three sizes of this machine are made. The 36 in. saw makes shingles from 16 to 20 inches long; the 40 inch and 42 inch saws make shingles 16 to 24 inches long. Heading, Box Stuff, &c., are made with equal facility. The 42 inch saw machine is more properly a Heading Machine.

The full page illustration gives a very perfect representation of the improved

WOODWORTH PLANING, TONGUEING AND GROOVING MACHINE,

weighing 3,200 pounds. These machines are built in eight different sizes, weighing from 3,200 to 8,000 pounds.

This Machine has been constructed to meet the wants of a large class of purchasers throughout the country, carpenters and builders, small planing mill owners, box makers and

many others who do not wish to incur the expense of the larger Machines.

It has four five-inch Feed-Rolls, with Burleigh's Patent Expansion Feed Gear Links; also, the best patent for weighting applied to the Rolls in front of the Cutter Head, which gives an equal pressure not affected by any inequality in the lumber. The Cutter Head is made of solid wrought iron, with cast steel journals running in Patent Self-Oiling Boxes, lined with the best quality of Babbitt metal, and has Index to gage the thickness of board. The Matcher Spindles are made of the best cast steel and are lowered below the line of the bed by loosening one bolt to each. The gears are all protected with substantial iron covers, to prevent breakages and accidents.

This Machine will Plane, Tongue and Groove 14 inches wide and will plane 24 inches wide and 4 inches thick, when the Matcher Heads are off. The Matcher Head is moved by a crank at the side of the Machine.

IN THE EARLY DAYS.

Reminiscences of early days in the Chippewa Valley.

From the Eau Claire Free Press.

Mr. Thomas E. Randall, of Eau Claire, is writing some very interesting reminiscences of the early days in the Chippewa Valley, for the *Free Press*. Below, we publish an extract, showing how near a mill came being erected at Eagle Rapids, and also of an Indian scene near the spot where the Union Lumbering Company's store now stands :

In 1840 a party of Sioux were way-laid near the Red Cedar river, and entirely cut to pieces ; and in November of the same year a party of six, belonging to the opposite belligerent, was cut off in the same way. The following year, a large party of Sioux came up by invitation of the Chippewas to Eau Claire, where they held a friendly meeting, and smoked the pipe of peace. This was repeated in October, 1846 when 150 braves, all mounted on ponies, came up to the Falls, and thence to Chippewa City, and held a treaty of peace with their hereditary foes. Among them were the great Chiefs, Wabashaw, Red Wing and Big Thunder. Their first meeting took place at the Falls, about sunset, and was rather informal, owing to some misunderstanding as to the place of meeting. The writer was present and heard part of the Reception Address, and subsequently learned from Ambrose—one of the interpreters—the substance of what was said on both sides. The

Sioux remained mounted on their ponies during the entire interview. The Chippewa Chiefs and the braves were painted after their mode indicating peace, and the head Chief advanced toward their guests with a large red pipe made of stone from pipe-stone mountain, in one hand, and in the other a hatchet, which was thrown with considerable force so as to partially bury it in the earth ; then raising the pipe to his mouth and taking a whiff or two, and turning the stem toward the Sioux Chief presented it for his acceptance. All this was done in silence ; the Sioux Chief received the emblem of peace also in silence, smoked a few whiffs, bowed respectfully as he handed the pipe, reined his pony one step to the right, and waited the next salutation. The substance of which was, "Friends, we are glad you have come, we are anxious to make peace with the Sioux nation. As you have seen us throw down and bury the hatchet, so we hope you are inclined to make peace." The Sioux Chiefs then threw down whatever arms they held, and declared their purpose to maintain permanent peace. They said their great father, the President, with whom they had never been at war, had requested them to conclude a lasting peace with the Chippewa nation ; and although they had sold their lands on the east side of the Mississippi, they still wanted to hunt there, and was glad that in the future they could do so without fear. This was all done through interpreters ; several of whom were present on each side, and closed every sentence they repeated with the expression of, "That's what we say."

The delegation met a much larger number of Chippewa Chiefs and braves the next day at Chippewa City where the ceremonies were still more imposing, and a dinner was served of which both parties partook. These demonstrations were so earnest, and seemed so sincere, that outsiders really supposed these hitherto mortal

enemies had become fast friends. But in the summer of 1849, an event occurred that showed that one party to this treaty reposed very little confidence in the faith of the other. It will, however, be necessary to relate some intervening circumstances, before we reach this. During the summer of 1848, a wealthy merchant of Galena, by the name of Bloomer, sent some agents up the Chippewa to select a site for a saw mill, and immediately came on in person with a large force, and commenced operations. The site fixed upon was the lower chain of Eagle Rapids, three-fourths of a mile below the present dam. The men brought along to execute the work, were mostly from the Wisconsin river, and at their head was the reckless and notorious Tim Hurley, and another hard case by the name of Tim. Inglar, and several others of like temperament. To secure hay for the winter, some of these men were sent up on the meadows in the neighborhood of Vanville, and hence the name Bloomer was given to the prairie and town.

Before winter came on, Mr. Bloomer got discouraged and sold the thing out to H. S. Allen at the Falls, and the project of building a mill on Eagle Rapids was thenceforth abandoned.

Bloomer himself returned to Galena, but his men were all turned over, with the teams and supplies to Mr. Allen, that is if they chose to stay, which most of them did. Hurley was married and built a house and saloon at the Falls, the first ever started in this Valley, which soon became the headquarters of every gambler and hard case in the upper valley, among others, a Frenchman, named Martial Caznobia, who on the fourth day of July, of this year 1849 with a crowd of these fellows, having imbibed pretty freely of "benzine," repaired to the wigwam of an Indian then camping at the Falls, wherein the Frenchman attempted some liberties with the Indian's squaw which was

promptly resented, and drawing a dirk-knife, he instantly drove it to the handle in the body of the would-be violator of his home.

The wound was a very dangerous one, bled profusely, and was thought the next morning to be positively fatal. It was Sunday morning, a great crowd assembled around, and at the Hurley House where Caznobia was supposed to be dying, when some one raised the cry, let's hang the d—d Indian, and no quicker said than done; a rope was procured, and headed by Tim. Inglar a rush was made for the Indian's residence, a noose was formed around his neck, the rope thrown over the limb of a tree, standing near the present site of the Union Lumber Co.'s store, the weight of several of these desperate men was thrown upon the other end of the rope, and the body of the Indian soon dangled between heaven and earth, a lifeless corpse.

Mr. Allen was absent at this time, down the river, but on his return, about three weeks after, he found great excitement and threatening demonstrations on the part of the Indians, who had assembled at the Falls to the number of 1,500, including all the Chiefs in the entire nation. It was with great difficulty that the fray of such a throng of exasperated savages was restrained by their Chiefs until Mr. Allen's return.

Only for their regard for Mrs. Allen and her family, and the timely interference of James Ermatinger and George Warren, it is possible that the mills and most of the buildings at the Falls, would have been burned. This they threatened to do unless the murderers of their brother were surrendered to them. After much delay and full explanations had been made in which the offenders disclaimed any intentional wrong against the Chippewa nation, that it was caused by whiskey, and they were sorry, now, the Chiefs and the braves became somewhat modified and agreed that the ring-leaders only

should be molested, and that they might be tried and punished according to our laws; upon which Tim. Inglar and three others surrendered themselves prisoners, and were placed on board of a boat to be taken to Prairie du Chien for trial. Eight Chippewa braves in two canoes volunteered to escort them down the river.

But as the party approached that point on the Chippewa, "half a day's march from the Falls," alarm and terror seized the brave escorts, and nothing could induce them to go another rod, in such constant dread were they of the Sioux, who twenty months before had promised eternal friendship.

The prisoners, however, continued their journey to Prairie du Chien, and surrendered themselves to the sheriff of Crawford county, to await an examination, but as there was no one to appear against them, they were discharged. They took good care, however, not to be seen on the Chippewa again.

THE MILWAUKEE MONTHLY.

Gilmore's *Milwaukee Monthly* is deservedly popular to the extent of a subscription patronage of *nineteen thousand*. No western literary publication has attained the standing and success of the *Milwaukee Monthly*. The merits of the magazine are appreciated and it has become the leading monthly of its class in the west. Subscription price \$1.00 per year. Address T. J. Gilmore, Milwaukee, Wis.

The La Crosse *Republican* and *Leader* estimates the amount of logs turned through that boom the ensuing year, at 175,000,000. The amount that will be manufactured at that point, this year, will be about 50,000,000.

TRIBUNALS OF COMMERCE.

From the Timber Trades Journal, London, England.

Since the repeal of the obnoxious duties which formerly weighed on the imports of foreign wood, it is seldom that the proceedings of Parliament present any subject that calls for comment that would be likely to interest those who are engaged in the timber trade. It is true that the Rating Valuation Bill introduced last year contained some proposals that threatened to affect injuriously the home-grower of wood, but the act fell through, and in the shape in which it has been re-introduced this year it is not likely to provoke serious discussion among the owners of wood and plantations. Among the many acts of the last Session of Parliament which shelved there was one which almost every one interested in the commerce of this country felt anxious to see carried into effect, viz., the Tribunals of Commerce act. It would be idle to dwell upon the vast importance in a country such as ours that trade disputes should be speedily and satisfactorily settled without recourse to the cumbersome and expensive mode of procedure afforded by the existing legal tribunals.

Our lawyers and law-makers were not, however, prepared to confer such powers on the commercial classes as would enable them to settle among themselves the differences that may arise between them in the transaction of business. The Judicature Commissioners, while reporting against the expediency of establishing Tribunals of Commerce in which the judges would be commercial men, had, however, to admit that great inconveniences frequently arise from the want of technical knowledge on the part of the judges and juries that are called upon to decide intricate trade disputes; and to remedy the evil they suggested the constitution of a court where a legal judge should be assisted by two skilled assessors, who could advise him on any techni-

cal matters that might arise in the course of such cases. Those who have had any experience in our law courts must have frequently witnessed trials in which the professional evidence on either side being diametrically opposed had the effect of creating the utmost confusion in the minds of the judge and jury. Such instances are far from rare, and throw discredit upon the administrators of justice.

Fortunately, the necessity of introducing some improvements in the administration of the laws affecting commercial interests has at last been recognized by Parliament. In the new Judicature Act, which comes into operation in November next, it is enacted that "the high court or the court of appeal may also, in any such cause or matter as aforesaid in which it may think it expedient so to do, call in the aid of one or more assessors." As a complement to the House of Lords, "to amend the acts relating to county courts." By the third section of this bill it is provided that "in any action it shall be lawful for the Judge, if he think fit, to summon to his assistance, in such manner as may be prescribed, one or more persons of skill and experience in the matter to which the action relates, who may be willing to sit with the judge and act as assessors; and their remuneration for so acting shall be at such rate as may be prescribed, and shall be costs in the cause, unless otherwise ordered by the Judge." This being a government measure there is every prospect that it will be adopted by the House of Commons. We do not consider these enactments sufficiently comprehensive to meet the requirements of the commercial community, and the optional powers conferred upon the Judges may restrict the limits of their usefulness at least for some time to come. It is much, however, to have obtained the acceptance of the principle by the Legislature, and as these acts come gradually into operation, it may safely be assumed that the advantages to

be derived from them will be so apparent as to prove the policy of extending their application. Since legislation on social questions is the order of the day, let us hope that commercial interests will receive a fair share of the attention of those in power; to few will be more welcome than to those engaged in the numerous industries connected with the home and foreign trade in timber.

THE LUMBER MARKET.

Why is the lumber market dull? This is a question difficult to answer, but which it seems to us must be answered on general principles. A prosperous lumber trade is chiefly dependent on a prosperous condition of the country generally. If manufacturing in any respect is to suffer it must suffer in the lumber department. Lumber is not absolved essential in the carrying on of all business. It is quite largely in the nature of a luxury or something which can be dispensed with. Public and private improvements, which can only be carried forward in prosperous times, are allowed to come to a standstill in dull times, and in such improvements lumber enters largely. But we do not admit that there is a condition of suffering among dealers or manufacturers who have calculated on a good fair season. Purchases were made during the early part of the season to an extent comparing favorably with other years.

And on the whole we expect from past experience and present indications that the trade in the fall will be fairly active and satisfactory.—*Lumberman's Gazette.*

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STEAM BOILERS.

Strength of Cylinder, Sphere and Flat Surfaces.

In analyzing the various forms of boiler shells they are found to resolve themselves into the cylinder, oval, sphere, chambered and flat surfaces.

THE CYLINDER.

According to the well known law of hydrostatics, the pressure of steam in a close vessel is exerted equally in all directions. In acting against the circumference of a cylinder, the pressure must therefore be regarded as radiating from the axis, and exerting a uniform tensional strain throughout the enclosing material. Its tendency to cause longitudinal rupture, or to rend the cylinder in lines parallel to its axis, may be considered as a force acting and reacting in opposite directions to divide the cylinder in two. As it must be exerted on equal areas in order that the action and reaction may be equal, this divellant force may be considered as the pressure exerted on the semi-circumference, and tending to rupture the cylinder in a plane drawn through the diameter. It follows, however, from the pressure acting equally in all directions, that the whole amount exerted on the semi-circumference is not equally effective in producing a strain perpendicular to the diameter through which the cylinder may be assumed to rend.

If we examine the force tending to cause rupture through the horizontal diameter, we shall find the pressure is exerted directly upwards and downwards only along the vertical diameter. As we recede right and left from this line, the pressure is exerted diagonally with diminishing vertical effect, to produce tension at the extremities of the horizontal diameter, and, unit vanishes altogether when we reach these points. The radial pressure at any point, may be resolved into two forces, the

one vertical and the other horizontal. It is evident the latter has no tensional effect at there extremities. By taking the component vertical forces at an infinite number of points in the semi-circumference it can be proved that their sum is equal to the full pressure exerted on a line equal in length to the diameter.

We may consider the cylinder as composed of a number of rings of a unit's length, placed side by side, each of which resists the pressure independently of the rest.

Hence the force, tending to rupture the cylinder longitudinally, is represented by multiplying the diameter by the pressure on each unite of surface. As this applies only to a cylinder of a unit's length, it is evident that the total amount of force, tending to divide the cylinder in lines parallel to its axis, is found by multiplying the above product by the length of the cylinder. The practical truth of this has been proved by experiment.

The retaining force opposed to this pressure, is evidently the resistance of the material at the two opposite sides which bear the strain.

The manner in which the strain is borne by the material depends greatly on its thickness. When this is considerable, compared with the diameter, as in hydraulic presses and cannon, the inner layers of the material are more severely taxed than those on the outside. This difference may be so great that the latter render no material assistance to the former. If we take two straight bars, of the same material and section but of different lengths, and submit them to the same tensile strain, they will be stretched, within certain limits, in proportion to their length. Suppose a bar 1 foot long is stretched 1-10 inch by a given weight, then a similar bar 10 feet long would be elongated 1 inch by a similar weight, the extension being simply a factor of the length. In a cylinder, say of 3 inches diameter, and 2 1-2 inches thick, we

may consider the thickness as divided into 1-2 inch layers. The inner layer will have a mean length of about 11 inches, whilst the outer one will be about 23 1-2 inches long. Suppose the material just capable of bearing an elongation of 3-20 inch per foot, then the inside layer would be damaged by an internal force that would expand the cylinder 1-20 inch in diameter whilst the outside layer would be stretched only to about one-half its tensile limit, being twice as long as the other. From this it may be seen how any increase in thickness beyond a certain degree may not add to the strength of the cylinder. The thickness of boiler shells and tubes is, however, so small compared with their diameter that the tension from the radial pressure may be regarded as being uniformly distributed throughout the material, the whole section thus acting together to resist the strain.

The strength of the cylinder to resist transverse pressure is therefore proportionate to the thickness, and is represented by the tenacity, or tensile strength of the material, multiplied by the section on both sides, or twice the thickness multiplied by the length.

At the moment of rupture, this retaining force is equal to the bursting pressure.

Representing the pressure, in lbs per square inch, by P, the diameter in inches by D, the length by L, the thickness of the material in inches by T, and its tensile strength by c, we have at the point of rupture

$$P D L = 2 T L c,$$

The factor L, being on both sides of the equation can be suppressed, and the equation stands—

$$P D = 2 T c.$$

$$D P$$

$$T = \frac{P D}{2 c}.$$

In calculating the strength, it is usual to consider the length as unity. The correctness of this is here shown,

the extra pressure due to increase length being balanced by a proportionate increase of material.

Although the length does not affect the strength of a cylindrical boiler with respect to the action of the internal pressure *per se*, we shall afterwards find that the length is an important condition when the expansion and contraction of the boiler on its seating are regarded as elements of weakness.

From the foregoing consideration, it is obvious that the strength of a cylindrical boiler to resist longitudinal rupture is in direct ratio to the thickness and tenacity of the material, and inversely as the diameter increased by sufficient pressure. On reaching the bursting point it should give way all round its circumference at the same instant—in fact, be “blown to atoms.” Of course this argument is entirely hypothetical. In practice there are always one or more lines of less resistance through which the fractures pass, leaving the rest of the material comparatively intact.

The tendency of the uniform radial pressure is to maintain the perfect circularity of the cylinder and to restore this form when it is departed from. Should the cylinder be somewhat oval, the two opposite sides at the extremities of the minor axis, having a greater pressure against them, will have a tendency to bulge outward until their resistance becomes equal to that of the rest of the circumference.

This equilibrium of pressure and resistance can only be maintained when the circumference is perfectly circular.

In a shell of wrought iron, the perfect circularity cannot be obtained when the plates overlap longitudinally. In this case the deviation from the accurate circle is usually but trifling and the weakness caused by the lap is rather to be attributed to the unequal distribution of the strain through the plates at the joint, than

to the deviation from the circular form.

In a cylinder, made with flat ends, the strength imparted by these renders it less liable to stretch at the extremities than at mid-length. Such a cylinder has thus a tendency, under internal pressure, to assume the form of a barrel.

Assuming the material to be sufficiently pliable, like india-rubber, and able to bear sufficient stretching, the sides would be further curved, and the spherical form be eventually attained by sufficiently increasing the pressure.

In very short cylinders, the ends play an important part in increasing the resistance to bursting longitudinally; and where the length does not exceed the diameter, the strength approaches that of a sphere. In practice, however local weakness arising from various causes—such as corrosion of plates and rivet heads, flaws, &c.—may lead to failure, against which the aid from the ends cannot be counted upon.

Again, in oval shaped boilers, the end plates assist materially in maintaining the shape against the tendency to become circular under internal pressure. Since the aid lent by the ends diminishes as the distance from these increases, an oval boiler is most liable to change of form at mid length.

In consequence of their tendency to alteration of shape under pressure, it is almost impossible to give any rules for the strength of elliptical boilers, as their resistance varies with every change of shape, according to very complicated laws.—*Boston Lumber Trade.*

Now is the time to advertise in the WISCONSIN LUMBERMAN. The best publication of its kind in the north-west, and most widely circulated. Terms moderate. Subscription price only \$2.00 per year.

CONSOLIDATION OF THE TRUCKEE (CALIFORNIA) LUMBER COMPANIES.

The *Truckee Republican* of July 18th says: "The Sierra Nevada Lumber Association has recently filed articles of incorporation in the office of the Secretary of State, at Sacramento. All of the owners of lumber mills on the Truckee river and its branches (except one) are represented in this association. We understand it is not the design of this combination of the lumber interests of this section to raise the price of lumber. One of the principal objects is to have a uniform price. Heretofore each mill has had to send out its separate agent to Salt Lake and other remote places, at heavy expense, to make lumber contracts. In this one item each mill would spend perhaps \$1,000 or \$1,500 per annum for traveling expenses, amounting in the aggregate to from \$10,000 to \$15,000. A considerable portion of this extra expense can be saved by the consolidation which has been effected, without increasing the price of lumber. It will benefit contractors and lumber dealers from abroad. They will not be compelled to travel around to each and every mill to see where the dry lumber is that they want. Now they will only have to apply to the officers of the association to obtain at once the information they desire. A detailed statement will be kept by the association of the amount and kind of lumber on hand at each mill and the length of time it has been sawed. There is no doubt but that if the association perfects its organization and carries out its plans as they have been foreshadowed, the results that follow will be beneficial not only to the mill owners, but to this entire community.

CANADIAN LUMBER TRADE.*From the Ottawa Weekly Citizen, July 17.*

Messrs. Boyd & Campbell, of Peterboro, arrived at Ottawa Monday, to confer with the mill owners for the purpose of deciding on a day on which to hold a general conference of lumbermen of Ontario and Quebec to adopt measures to reduce the production of lumber. The meeting is to be held some time on or after the 22nd inst., and there is every probability that all the large saw-mills of the two provinces will shut down for the season early in August. We are pleased to see that the lumbermen are at length awakening to a sense of the danger that threatens their trade, and the loss they are causing the country. The mill-yards everywhere are crowded with lumber, the Quebec and United States markets are glutted. The English market is low, and the rate of production of lumber is fully double the demand. Mill owners are running their establishments on their credit alone, and not on the proceeds of their sales, many of them paying out from \$3,000 to \$5,000 per week for working expenses. It is not to be wondered at, that the banks are becoming uneasy, and that accommodation is more difficult to be obtained. The course of the lumbermen hitherto has been simply suicidal. The pineries have been cut down, and the timber has been cleared out of the country at an alarming rate. If the lumbermen do not see fit to adopt a wiser course, they need not be surprised if the government should interfere, and by placing an export duty on lumber, check the operations that are ruining the trade. We hope that the mistaken "enterprise" of a few will not prevent the lumbermen from arriving at a wise decision. If the mills are shut down there will still be plenty of employment for the hands in saving the harvest, and in carrying on the public works of the country.

From the Bobcaygon "Independent."

The accounts that arrive from the chief points of consumption are all in the same strain, and represent the current prices for lumber as exceedingly low and with a weak demand. It is now quite clear that Canadian lumber, during the present season, sold in the American market, will not realize prices that will cover expenses. Very heavy losses will be sustained by some firms, and it will be well if no commercial disaster ensue. The square timber trade is in a very bad state, and is quite unproductive. The proposal has been made, and we understand, has been seriously entertained, that the Canadian lumbermen should not get out any logs whatever during the coming season, and there is a rumor that the Canadian banks, (only five in number,) who chiefly supply the funds for carrying on the lumbering operations, will decline to advance any funds for operating in the woods next winter. This would be a great advantage to the trade, and would place it on a sound footing for several years to come. Whatever may be the result of the proposed cessation of labor, it may be accepted as certain that next year the lumbering in the back country will be very limited in extent, and the settlers should make their arrangements accordingly.

From the Monetary Times.

Now, it is notorious that the lumber interest is entirely dependent on the market of the United States, and this has seldom been in a more thoroughly unsatisfactory condition than at present. Lower grades of lumber comprise three-fourths of our total production, and these grades cannot be sold to cover cost. The market is glutted with lumber, which has been sent forward on low freights, and there is no prospect of better prices for the remainder of the season. The saw-mill interest, therefore, and all that depends on it, is becoming depressed. Many of our towns are almost supported by the

saw mills of the adjacent country, and already feel the depression, though not seriously yet. It is when mills begin to be closed up, hands discharged, time cut down, and demand for all kind of supplies shortened, that the towns will begin to feel the burden. Things have not come to this pass as yet; but another season such as we have had will render it inevitable. Production must be shortened. This is the only possible remedy and the only possible way to a better state of things.

All that we have said respecting the sawed lumber interest applies with equal force to the square timber business. This production finds a market in England and Scotland. But that market is flat. Labor strikes and over production have brought about a great reaction in the prosperity which England has been enjoying for some years back. Consequently the building interest is not buoyant. It has suffered a check. The demand for timber is slack. The timber merchants of Quebec, have, therefore, large stocks on hand, and they are rather likely to loose money on them than otherwise. Quebec is full of timber that ought to have been in England by this time, and the money that should have been drawn against timber shipped is locked up in advances.

This must reach generally on the interior districts, from whence supplies of timber are sent. The vast regions of the Ottawa, the Trent Valley district, and its tributaries, the region bordering Lake Simcoe, and also, to some extent, the western peninsular, where such large supplies of hardwood are still to be found, all are likely to pass through a period of depression. For here also, nothing can bring matters round but largely diminished production.

Lumbermen and lumber dealers will find the WISCONSIN LUMBERMAN just the thing for latest information.

ALONG THE LINE OF THE CENTRAL.

The Steven's Point *Pinery* says a side track will be put in by the Central Company, running along through the city to the saw mills and lumber yards, that will be of great benefit to the business interests of the place.

A correspondent from Sand's mills says: "There is a constant run of land lookers, mostly a very fine class of men, looking for homes, and the Wisconsin Central Railroad Co., are the most accommodating company we ever saw, or ever did business with, which has a very good effect in making everything pleasant, and the rates and passenger tariff are such that none can complain. Any one riding with Conductor Mitchell will have everything done to make the trip pleasant."

A large and commodious hotel is being built at Colby.

A store is being built at Sand's mills on section 78.

The Steven's Point *Journal* reports a serious fire on section 29, which destroyed a new mill being put up by Clark & Co. All their supplies, material, &c., were burned, causing a loss of \$2,500.

The fires along the road have been quite serious and considerable timber has been injured. The company lost 2,000 ties by fire, near Chelsea.

CONCERNING the reciprocity treaty the Green Bay *State Gazette* says:

We do not imagine our lumber interests would be materially effected, certainly, the Wisconsin lumber market would have little to fear. Distance, and freights would be more than overbalance the lower cost of production which it is assumed is the case in Canada. Lumber is now as low as it can be and the steady increase of demand and supply affords an ample protection.

THE CHAMPION SAWING.

Three weeks ago Saturday, the circular saw in the mill of E. Colby & Co., near Stanton, on the Iona & Stanton branch of the D. L. & L. M. R. R., did the champion job, which we think will be generally conceded. In eleven and one-half hours, one circular saw in this mill cut 236 logs, making 91,577 feet of lumber, 75,000 feet of which was inch stuff, and the balance inch and a half and two inch stuff.

This is 15,000 better than any other record by one saw in the same time. The men who did the work were E. H. Percy, head sawyer, Robert Black, setter, and H. Sholton, edger. Mr. Sholton alone put all this lumber through a patent gang edger. If any mill, in this or any other state, can show a record like this, they would like to see it. The lumber was well scaled, and the men will make affidavit to the work if necessary.—*Valley City Grand Rapids Enterprise Mich.*

THE MIDLAND.

A meeting of the directors and stockholders of the Wisconsin Midland railroad was held at the Boom Company's office with a very good attendance, President J. L. Dorrance occupying the chair. Nearly all the interests of the road were represented. The meeting being called for the election of officers, that subject was somewhat discussed and it was resolved to postpone the election until August 5th. There seemed to be a sanguine feeling among those present that there was still a chance for the Midland road, and that with proper effort on the part of the business men along the line, it could even now be built. The judgments against the company in favor of Mr. Mallett for teams furnished the engineers who surveyed the route, have all been settled up, and the company, although claiming no particular resources, is

proud to say that it is out of debt.—*Oshkosh Northwestern.*

ARNOLD, YALE & Co.'s *Illustrated Mechanical Journal* is growing more and more attractive. As an exponent of the interests of manufacturers and the important criticism of mechanical production, it is outspoken. Every issue contains much information to machinists, is finely illustrated and is worth the price of subscription for the entire year. Terms, \$1.00 per year. Address, Arnold, Yale & Co., Milwaukee, Wis.

AN ARKANSAS SAW MILL.—I walked out south of the village one day, along the creek, and came upon a little saw mill, where a circular saw, something larger than a Mexican dollar, was slowly eating its way through a pine log, sixteen inches in diameter. It took two men to manage the little log, and each had time to enjoy a short but refreshing "cat nip" while the saw was laboriously eating its way from one end to the other of the ten foot log. Then the machinery would be stopped, and the two bony and sinewy yeomen would hold consultation as to the best method of turning the log. They'd squint at it out of one eye, squirt tobacco juice, and go around to another point of observation, squint at it with the other eye, squirt tobacco juice, compare notes, argue, and finally arrange for scaling the other side. Then the saw would be started, and they would take another nap. I timed the saw and the men, and made a calculation as to the amount of lumber they would cut in a day, but I'm afraid to publish the estimate, lest I should be accused of lying.

PLANTING TREES ON LAND WASTES.—Much attention is being given to the planting of those loose sands, so very common beside several sea shores—in the case of Holland, Belgium and the North of France, for example, where the nudity of the coast is so dreary. It would be an error to suppose that the air being highly charged with sea salt, injures vegetation, as many of these wastes were wooded districts in the twelfth century, and the reader can recall places, if not covered with trees to the water's edge, as in Sweden and Norway, at least to very near it. To plant these golden sands, patience and a just comprehension of the circumstances are required. The Dutch have solved the problem; they commence by planting the marine rush, which constitutes a vegetable cement, and then follow in due time the cembur pine, or the common aspen. Hence the truthful remark, without the Dutch, Holland would not exist. Amsterdam may be built on herring-bones, but many of the towns exist owing to the woods. At Boulogne Sur Mer, Adams, the well-known banker, has successfully planted 700 acres of the sands in question. The cultivation of pine for its resin is very profitable in the south-west of France, where the soil is a moor or sand. In the course of thirty years land not valued at more than six francs per acre cannot now be purchased under 250 francs. The *metayer* system is pursued, where landlord and the farmer equally divide the profits, the holdings varying from 10 to 150 acres.—*Cor. Cal. Farmer.*

A FLOATING SAWMILL.—A sawing machine of novel construction has just been brought into use at Granton by Messrs. Calder & Lunnan, importers of timber from the Baltic. The invention designed is to cut railway sleepers afloat at the ship's side, in order to save the expense of carriage to the ordinary mills. The

boiler and sawing gear are of the ordinary description, but are placed on a floating platform or flat-bottomed punt, entirely decked over, and which when afloat is only a few inches out of the water. From the side of this vessel an elevator projects into the water, and receives the blocks of timber. They are then by means of girding chains conducted on to the saw frame, and cut through from end to end. The inventor of the machine is Mr. Robert Melvine, Sunnyside Foundry, Alloa. From experiments made last week, it is found the sleeper blocks can be sawn at the rate of 1,500 a day.—*London Timber Trades Journal.*

LARGE LOSS OF CORDWOOD NEAR AUSTIN, CALIFORNIA.—An Austin paper of the 13th inst. says:

The Manhattan Mill and Mining Company suffered a severe loss by fire on Saturday night, by incendiaries setting fire to wood-ricks on the company's principal wood ranches, sixteen and twenty-five miles from here, respectively. Upwards of 1800 cords of wood were destroyed, worth from \$12 to \$15 per cord at this city. The two piles were fired in several places, but the fire being first observed from a great distance, the entire piles were consumed before assistance could be rendered. Sheriff Emery and a man named Webster followed horse tracks from the scene of the fire on Dry Creek for a distance of nine miles, when they came upon a man asleep in the brush, whom they arrested. The man was fitted at all points, there being found on his person four revolvers, two bowie-knives and a double-barreled gun. He made some attempt at resistance, but Sheriff Emery would not permit any nonsense, and brought the man to town. He gives the name of L. T. Haskell, and is wood-hauler by occupation.

CHAMPION SHINGLE PACKERS—A contest among some of the shingle-packers at U. D. Mehills & Co.'s mill has lately been decided. Mr. Herman Walther, foreman at the mill, gives us the figures, as follows: On May 26th, Miss Emma Carbano packed 40,250; on the 27th, Miss Annie Dougherty packed 42,000; on the 28th, Miss Delia Laduke packed 43,000; and on the 29th, Miss Barbette Aures distanced all competitors and secured the championship by packing 44,000. Each day's work was ten and one-half hours. The figures we have given can be verified and Miss Aures wears the belt—for the present at least. The best single hour's work—4,500—was performed by Miss Delia Laduke.—*Fond du Lac Journal*.

A man named Nichols, an employe in Mess. Tyson & Sweet's mill, in Manistee, was literally sawed in pieces, on the 3d inst. When last seen he was standing near the saw, and when the inmates of the mill saw him again he was passing under the saw. His head was sawed in two, and his body was severed in one or two places. There was nothing in the saw at the time, and it is a mystery how he became thrown upon it, some supposing, however, that his clothing was caught and he was thereby jerked into the jaws of death before he had time to even utter a cry of distress. He is said to resided in Milwaukee, and some claim that he has a family there while others are of the contrary opinion.—*Grand Rapids (Mich) Enterprise*

SOME SAWING—The following item comes through a special dispatch to the Chicago Times. The logs were probably selected with a view to the finer class for rapid sawing and convenient handling.

On the 3d instant, the McGraw Mill at Portsmouth, Michigan, with three gangs and two circulars, cut the enormous amount of 179,718 feet,

log scale, in the actual running time of two hours and forty minutes.

A KING OF TREES.

In the great forest, near Cape Coast Castle, Africa, the silk-cotton, like a king of trees, towers over all others. It is truly a most wonderful tree. It grows faster than any other, for the wood is soft. It must be one of the largest trees in the world. There is a most wonderful provision of nature shown in this in compensating it for the softness of its wood, which, from its immense size, could not support the weight of the branches and towering top. Rising far above the other giants, therefore deriving no shelter from them, each one stands for a greater part of its height a separate tree, and exposed to the full force of the constant tornadoes which sweep over this part of the country during the rains. The necessary support is given to it by a number of large buttresses all round the stems; they are formed by the roots which rise over the ground in a flattened shape extending up the sides of the trees, and forming most regular supports all round. In many places the natives make use of the spaces between these buttresses as houses; merely making a roof overhead, the house is complete. As the people of this country never have more than three walls to their houses, and the tree, with two of its buttresses supplies those, they are quite ready-made houses for them, and indestructible. While the tree is young all the bark is covered with very large, strong thorns. For what purpose it is provided with these is not so evident.

Examine the Lumbermen's Register at the end of this number. It alone is worth the price of subscription. Send in your subscriptions at once; only \$2.00 per year.

LUMBER MARKET.

Milwaukee, Wisconsin.

MILWAUKEE, August 10, 1874.

The yards are pretty well stocked with the various grades and kinds of lumber and dealers are having a decided resting spell. There is no difficulty just now in more orders being sent in than can be filled. The trade is very dull, as is usual at this season of the year. Dealers expect an improvement in business by September first, but the most sanguine scarcely dare hope for any active advance in prices. Yard rates remain unchanged. We quote :

Common boards.....	12 00@	
Joist and Scantling, 12 by 16 ft.....	12 00@	
do do 18 ft.....	13 00@	
do do 20 ft.....	14 00@	
do do 22 to 24 ft.....	15 00@	17 00
Fencing.....	12 00@	
1st and 2d clear dressed siding.....	25 00@	
1st com. do do.....	20 00@	
2d com. do do.....	16 00@	
1st com. flooring.....	35 00@	
2d do do.....	23 00@	
3d do do.....	23 00@	
1st and 2d clear boards.....	45 00@	
3d do do.....	35 00@	
Narrow select finishing boards.....	28 00@	
Wide select com.....	20 00@	48 00
1st and 2d clear 1½, 1½ and 2 inch.....	45 00@	
3d clear do.....	35 00@	
Wagon Box Boards.....	30 00@	35 00
A stock do.....	35 00@	
B do do.....	25 00@	
C do do.....		@ 12 00
Square pickets.....	13 00@	
Flat pickets.....		@ 12 00
Lath & M pieces.....	2 50@	2 75
A shingles, # M.....	3 25@	
No. 1 do do.....	1 50@	2 25
Timber, 18 to 22 ft.....	15 00@	18 00
Timber, 24 ft and over.....	18 00@	35 00

Chicago, Ill.

From the Chicago Times, August 8.

FREIGHTS—There was no improvement in the demand for lumber-carrying vessels yesterday, and as the supply was greatly in excess of the moderate requirements of the trade, rates remained weak, as follows ;

Alpena.....	\$1 37½
Oconto.....	1 75
Muskegon.....	1 25
Manistee.....	1 50
Ludington.....	1 37½
White Lake.....	1 37½
Pentwater.....	1 37½
Grand Haven.....	1 25
Saugatuck.....	1 25
Ford River.....	1 25
Nominee.....	1 50
Bay City.....	1 75

LUMBER AFLOAT—Plenty of lumber was offered at the Franklin street sales docks, the fleet that remained over from Tuesday being increased by several additional arrivals from the east shore. Despite the rather unsettled weather, both city and country buyers were in fair attendance, but were unwilling to purchase, except at lower prices. Hence, a feeling of weakness was developed, and although sellers were reluctant to grant concessions, a dozen or more cargoes were sold at an average decline of 25c from previous quotations. The weakness was principally noticeable in common grades, and choice mill-run lumber remained comparatively steady, under moderate offerings. At the close several cargoes remained at the docks unsold. Sellers continue to sell on "p. t.," and only one commission dealer had the stamina to report his sales yesterday. We quote :

Joist and scantling.....	\$ 8 00@	8 50
Mill-run boards and strips.....	14 00@	17 00
Common strips and boards.....	9 00@	13 00
Lath.....	1 60@	1 62½
Shingles.....	2 50@	2 75
Pickets.....		8 00

Cargoes schrs Kate Lyons and Westchester, 356,000 ft boards, at \$13; 13,000 lath at 1.62½; pickets at \$8. Both cargoes from Muskegon, and sold by C. Deming.

From the Inter Ocean, Chicago.

AT THE YARDS—Trade at most of the yards was rather quiet yesterday, though a few dealers report a slight improvement. The stocks are large and prices ruled unchanged, as follows :

YARD PRICES.

First clear.....	\$53 00@	55 00
Second clear.....	43 00@	50 00
Third clear, 1 in.....		@ 49 00
Third clear, thick.....	43 00@	45 00
Clear flooring, 1st and 2d together, rough.....	38 00@	40 60
Clear siding, 1st and 2d together.....	23 00@	24 00
Common siding.....	18 00@	20 00
Flooring, first common, dressed.....	33 00@	35 00
Flooring, second common, dressed.....	28 00@	30 00
Wagon-box boards, 16 in. and upward, select.....	35 00@	40 00
Select, 1-in.....	26 00@	30 00
Select, thick.....	32 00@	35 68
Stock boards, A.....	32 00@	35 00
Stock boards, B.....	28 00@	30 00
Common boards.....	10 50@	11 00
Joist, scantling, small timber, etc 16 feet and under.....	10 50@	11 50
Fencing.....	10 50@	11 00
Joist and scantling, 18 to 24 ft.....	14 00@	20 00
Pickets, square.....	10 00@	11 00
Pickets, flat.....	12 00	13 00
Cedar posts, split.....	16 00	18 00
Cedar posts, 5 inch.....	20 00@	
" 6 inch.....	25 00	
" 7 inch.....	30 00	
" 8 inch.....	35 00	
Lath.....	1 75@	2 25
Shingles—Sawed No. 1.....	1 50@	
" "A".....	2 90@	3 12½

Shingles on track are steady at \$2.75@3.00 for A star, and \$1.25 for No. 1 sawed.

WHITE WOOD.

Box boards.....	40 Clear.....	35@	40
Common.....	25 Culls.....	10	15

HARDWOOD.

OAK.		ASH.	
Plank, common..	@ 25	Board and planks.30	@ 65
Plank, clear...	48	Wagon poles, each.55	60c
Bolsters.....	45	Flooring, 6-in dr'd	
		and matched....	40
BLACK WALNUT.			
Culls.....	25 @ 35	Flooring, 3 and 4	
Common.....	50 55	inch dr'd and	
First and 2ds.....	60 75	matched.....	50
Clear.....	75 85		
Counter tops, (ec-		Culls.....	20 25
lected).....	100 150	Common.....	40 40
Flooring, 6-in dr'd		Firsts and 2ds	50 50
and matched....	80	Clear.....	65 65
Flooring, 3 and 4			
inch dr'd and		HICKORY.	
matched.....		Plank (selected)..	50 50
		Axles, per pair....	1 50
MAPLE.			
Plank.....	30 40	Basswood.....	12 25
Flooring, 8-in dr'd		Butternut.....	25 60
and matched..	40		
Flooring, 3 and 4			
inch dr'd and			
matched.....	45		

St. Louis, Mo.

From Methudy & Meyers latest report we extract as follows:

We have no new feature to note in the lumber market; all kinds dull as ever—both white pine in raft, and depot and levee lots; prices nominally unchanged. Sales of white pine afloat were reported to the extent of 100,000 feet. Wisconsin (dimension) at \$11, 200,000 feet do (do) \$12, 120,000 ft do at \$15. 200,000 ft do at \$16, 600,000 ft do at \$21; we quote Minneapolis and Chippewa afloat at \$13@14, and Wisconsin at \$13@23—fair to good at \$15@18. Lath firm at 2.40 on raft—city sells at 2.75@3 del. Shingles unchanged at 3.40\$3.60 on raft. Trade at the yards improving, but prices are quotably unchanged.

We quote the range for depot and levee lots: Y. P. flooring—green at \$22@23 and \$12@13; dry do \$25@27 and \$14@15; yellow pine mill-run dimension at \$13; poplar at \$15@17 for mill-run boards and stips—2d and clear do do \$20@22, 3d rate \$11@12; black walnut \$20@25 for inferior, \$30@35 for common to fair, \$38@40 for good, and \$42.50@45 for choice; oak at \$15@25; ash at \$20@27; hickory at \$25@32.50; sawed cedar timber at \$27@30—hewn at \$23@25; cedar posts at \$23@30; walnut table legs at \$14@20 set. Special orders filed at higher rates.

Sales at depot and on the levee—2 cars yellow car flooring at 25.50 and 15, 5 do at \$25 and 14, 10,000 feet poplar boards at \$15, 4,000 chair plank at \$18, 20,000 ft do at \$19, 25,000 do at \$20; 1 car do (order) at 22.00 del. 10,000 poplar bed slats at 15.50, 3 cars walnut at 36.00. 1 car sawed cedar at 28 00, 3 do posts at 25-00 @ 100, 2 do at 26,00, 1,500 telegraph poles at 60c each.

From the Commercial Gazette.

WHITE PINE.	
1 inch 2d clear.....	\$50 @ 52 50
1 inch 3d clear, 7 to 8 inches.....	35 @ 40 00
1 inch select (Star).....	40 @
1 inch narrow extra common.....	22 50 @
1 1/4, 1 1/2 and 2 inch 2d clear.....	52 50 @ 55 00
“ “ select (Star).....	40 00 @ 45 00
A clear stock board, 12 inch.....	40
B “ “ “.....	27 50 @ 30 00
C “ “ “.....	15 00 @ 20 00
A box boards.....	40 00 @ 42 50
B “ “ “.....	39 00 @ 32 50
1st clear flooring dressed (count).....	50 00 @
1st common “ “.....	36 00 @ 37 50
2d common “ “.....	26 00 @ 30 00
Sel. fencng flooring “.....	19 00 @ 22 50
1st and 2d clear siding.....	24 00 @
1st common “ “.....	21 00 @ 23 00
2d “ “ “.....	18 00 @
Select fencing.....	12 50 @
3/4 inch common ceiling dressed, count double bead.....	25 00 @
3/4 inch 1st common ceiling dressed count double bead.....	30 00 @
3/4 inch 1st common ceiling dressed, count, double bead.....	35 00 @
Common boards, 12, 14, 16 and 18 ft.....	14 00 @ 18 00
“ “ 10 and 20 ft.....	15 00 @ 20 00
Cull boards (sheathing).....	11 00 @ 15 00
Grub plank, 14, 16, 18 or 20 feet.....	10 00 @ 12 50
Grub joists, 2x6 and 2x8 16 feet.....	11 00 @ 12 50
6 inch fencing, 16 feet.....	14 00 @ 18 00
6 “ “ 12, 14 and 18 ft.....	14 00 @ 18 00
6 “ “ 10 and 20ft.....	14 00 @
Narrow “ 16 ft.....	14 00 @
Cull “ “.....	11 00 @
Cull “ 12 and 14 ft.....	11 00 @
Joists 12, 14 and 16 ft.....	14 00 @ 18 00
“ 18 and 20 ft.....	16 00 @ 20 00
“ 23 and 24.....	19 00 @ 24 00
2x4 scantling, 12 ft.....	14 00 @ 18 00
“ 14 and 16 ft.....	14 00 @ 17 00
“ 18 ft.....	14 00 @
“ 20 ft.....	18 00 @
Yard timber 13 to 16 ft, 4x6 to 8x8.....	14 00 @
“ 18 and 20 ft.....	16 00 @
Flat pickets, rough.....	17 50 @
Flat clear pickets, dressed and headed No. 9.....	35 00 @
1 1/2 inch square pickets, rough.....	15 00 @
“ “ dressed and headed 85.....	35 00 @
O. G. clear battons, 2 1/2 inches wide.....	11 00 @
“ “ 2 1/2 “ “.....	9 50 @
“ “ 1 1/2 “ “.....	9 00 @
O. G. 2d quality battons 2 1/2 in wide....	9 00 @
YELLOW PINE.	
1st and 2d clear flooring 5 in (count)...	35 00 @ 37 50
1st and 2d clear flooring mixed widths, (tape).....	37 50 @
1st and 2d clear flooring, narrow, one width (tape).....	38 00 @ 40 00
Com flooring, mixed widths (tape).....	25 00 @
“ 6 in (count).....	27 00 @
1st and 2 clear boards 10 in and over.....	49 00 @
“ “ 1 1/2 in.....	45 00 @
1 1/2 in 1st and clear flooring (tape).....	37 50 @
1 1/2 inch common flooring (tape).....	27 00 @
Common boards, rough.....	17 50 @
Common fencing.....	17 50 @
POPULAR.	
1st and 2d clear siding (not dry).....	18 00 @
6-16 in ceiling (count) dres'd, plain.....	20 00 @
1st and 2d clear 1 in.....	40 00 @
“ “ 1 1/2, 1 1/2 and 2 in.....	40 00 @
Common flooring dressed, (count).....	27 50 @
Fencing.....	15 00 @
SHINGLES AND LATH.	
A sawed shingles.....	4 00 @ 4 75
Star No. 1 (clear wrapper).....	3 00 @
Star No 1.....	2 50 @
City lath.....	3 25 @ 3 50

HARD WOOD—DRY—Levee Rates.

Table listing lumber types and prices: Walnut, choice; Walnut, common; Walnut, inferior; Ash; Oak; Hickory; Poplar 2d clear; Poplar 3d rate; Cedar, sawed; Cedar, hewn; Cedar posts.

Yard rates are for dry, and are from \$7 to \$10 higher. Charges for dressing rough lumber—one side \$2; two sides \$3.

Saginaw, Michigan.

From the Saginaw Courier.

ROUGH LUMBER, CAR LOTS.

Table listing rough lumber items: Three upper qualities; Select boards; Common stock 12 inch; Fencing strips; No. 1 flooring strips; No. 2 flooring strips; Common boards; Coarse common; Timber, joist and scantling 12 to 18 ft.; Lath.

ROUGH AND DRESSED LUMBER AT YARDS.

Table listing rough and dressed lumber items: Three upper qualities; Common boards; Common 12 inch stock boards; Fencing strips; Call boards; Scantling, joist and timber, 12 to 18 feet; Lath.

ROUGH LUMBER.

Table listing dressed lumber items: Siding No. 1 clear; No. 2; No. 3; Flooring No. 1, 6 in.; No. 2, select 6 inch; No. 3 do common; Ceiling No. 1, clear; No. 2; No. 3; Clear boards, s 1 side, 7 to 20 in.; No. 2; No. 3 boards, select 7 to 20 in, s one side; Common boards.

Oswego, New York.

From the Oswego Weekly Palladium.

OSWEGO, August 4, 1874.

There is no change to report in the market this week. Prices remain firm and about the usual amount of business transacted. The receipts are light but the shipments being correspondingly light. Leaves a good stock of all grades at the yards.

SALES.

Table showing sales for the week, last week, and increase: For the Week, Last Week, Increase.

RECEIPTS BY LAKE.

Table showing receipts by lake for the week, last week, and season to date: For the Week, Last Week, Season to date.

MICHIGAN PINE.

Table listing Michigan pine items: Three uppers; Clapboard strips, 1st quality.

CANADA PINE.

Table listing Canada pine items: Three uppers; Pickings; Common; Inch siding, mill run; 1 1/2 inch siding, selected; 1 1/2 inch siding, mill run; 1 1/2 inch siding, selected; 2 inch siding, mill run; 2 inch siding, selected; 2 inch siding, box.

Table listing various lumber items: 1x10 stocks, 13 ft, culled; 1x10 stocks, 16 ft, culled; 1x12 stocks, 13 ft, culled; 1x12 stocks, 16 ft, culled; 1x14 stocks, culled; 1x16 stocks, culled; 1 1/2 x10 plank, culled; 1 1/2 x10 plank, culls; Inch strips, culled; 1 1/2 inch strips, culled; 1x1 1/2 inch strips, culls; Ash, Canada finishing, 1st quality; common.

Table listing various lumber items: Black ash; Black walnut; Hemlock; Shingles, pine, 1st quality, 18 inch; 1st; 2d; cedar 1st; 2d; Hemlock, 1st; Spruce, 1st; Mich. pine shingles, best quality 18 inch; Pickets, pine, 1st quality, flat; 2d; 1st; 2d; Lath.

Pacific Coast.

Table listing Pacific Coast lumber items: Pine, pug. snd. and or. 3 and 4 in.; Do for St. work; Do 2-in for side walks; Do flooring and stepping 1st quality; Do do 2d quality; Redwood, rough; refuse; Pickets, rough; pointed; fancy; Redwood flooring, T and G surfaced; refuse; rustic; Surfaced 1/2 inch; P. Orford cedar—first quality; second; third; Sugar Pine—1st quality; 2d; 3d; Laths; Shl gles; Battens, 3/4 ft.

New York City.

LUMBER &c.—DUTY: Hemlock, sycamore, bass and white wood, $\frac{3}{4}$ M feet \$1; all other varieties of undressed lumber $\frac{3}{4}$ M feet \$2; dressed lumber $\frac{3}{4}$ M additional each side 50c; planed one side and matched, additional, \$1; planed two sides and matched, additional, 1.50; square timber per cubic ft. 30 cents; shingles per M 35c; pine clapboards, (4 feet) per M pieces \$2; spruce clapboards, (4 feet) per M pieces 1.50; pickets and palings 20 per cent. ad val.

Spruce, eastern, per m. ft.	20 00@22 00
Bird's-eye maple logs, per sup ft.	@
Black walnut logs	3@ 6
Black walnut, figured and blistered	8@ 25
Yellow pine timber, Georgia	27@ 30
White oak logs, per cubic feet	45@ 50
White oak plank, per m. feet	50 00@55 00
White pine shipping boards	25 00@28 00

MAHOGANY, CEDAR AND ROSEWOOD—DUTY FREE.

Mahogany, St. Domingo, crotches, per ft 25	@70
“ “ logs	@25
“ Cuba, logs	@14
“ Port-au-Prince, crotches	@40
“ “ logs	@18
“ Neuvitas	@
“ Mansanilla	@15
“ Mexican logs, small	@16
“ Honduras, logs	@12
“ “ “	@10
Cedar, Mansanilla	8½@ 9½
“ “ small	7 @ 8½
“ Mexican, logs	8 @13
“ Honduras, logs	9 @10
“ Florida, per cubic ft.	60 @80
Rosewood, ordinary to good Rio, per lb.	2 @ 4
“ good to fine Rio	4 @ 8
“ ordinary to good Bahia	2 @ 3
“ good to fine Bahia	3½@ 7

Albany, New York.

From the Albany Argus, Aug. 1, 1874.

The active movement in lumber noticed last week was of short duration, though some large sales of common Michigan box have been made to manufacturers at tempting prices, and below our quotations. The general trade of the district has been quiet. Lumber is now marked down to a low figure, to which the trade will hold, and to next season if it be necessary.

Receipts by canal are light; freights are low; yet there is not any thing in the aspect of trade to induce manufacturers to send forward more than they can possibly help.

Stocks of all kinds are ample and well assorted.

Considerable interest is felt in the action at the Ottawa meeting which will convene today; it is hoped and generally expected that something will be done to curtail production.

The Ottawa Citizen reports sales to a New York firm on the 23d inst. of 2,000,000 feet common grades on p. t.

At Chicago the reported receipts of lumber by lake, to the 21st of July were 480,334,400 feet against 498,446,000 feet the year previous the shipments from January 1st, are 294,397,-

000 feet against 280,766,000 feet the previous year.

Canal freights from Buffalo to Albany are, 4.25 $\frac{3}{4}$ M feet for pine and 5.25 for hard wood; from Oswego, 2.00.

The receipts at Albany by the Erie and Champlain canals during the 3d week of July were:

Bds. &c' t' g. ft. Shingles M. Tim' r c ft. Staves, lbs.		
1873.. 25,988,900	680	2,011,500
1874.. 18,776,700	586

Of the boards and scantling received 8,791,400 feet were by the Erie, and 4,985,300 feet by the Champlain canal.

The receipts at Albany by the Erie and Champlain canals from the opening of navigation to July 23d, were:

Bds. &c' t' g. ft. Shingles M. Tim' r c ft. Staves, lbs.		
1873.. 136,208,310	1,689	3,197,300
1874.. 155,556,300	6,780

River and eastern freights are quoted

as follows:

To New York per M.	\$ 1 25
To Bridgeport	2 00
To New Haven	2 00
To Providence	2 50
To Pawtucket	3 00
To Norwalk	1 75
To Hartford	2 75
To Middletown	2 25
To New London	2 50
To Philadelphia	2 75
To Baltimore	4 00
To Richmond, Va.	5 00
To Boston, softwood	5 00
To Boston, Hardwood	6 00

The present current quotations of the yards are:

Pine, clear $\frac{3}{4}$ m.	\$55 00@58 00
Pine, fourths $\frac{3}{4}$ m.	50 00@53 00
Pine, selects $\frac{3}{4}$ m.	45 00@48 00
Pine, good box $\frac{3}{4}$ m.	20 00@25 00
Pine, common $\frac{3}{4}$ m.	14 00@16 00
Pine, clab board strips	@48 00
Pine, 10 inch plank, each	38@ 43
Pine, 10 inch plank, culls, each	21@ 23
Pine, 10 inch boards, each	27@ 31
Pine, 10 inch boards, sulls, each	16@ 18
Pine, 10 inch boards, 16 ft, $\frac{3}{4}$ m.	26 00@28 00
Pine, 12 inch boards, 16 ft, $\frac{3}{4}$ m.	26 00@29 00
Pine, 12 inch boards, 13 ft, $\frac{3}{4}$ m.	25 00@28 00
Pine 1½ inch siding, select, $\frac{3}{4}$ m.	40 00@44 00
Pine, 1½ inch siding, common, $\frac{3}{4}$ m.	@18 00
Pine, 1 inch siding, selected, $\frac{3}{4}$ m.	38 00@42 00
Pine, 1 inch siding, common, $\frac{3}{4}$ m.	16 00@18 00
Spruce boards, each	@ 15
Spruce plank, 1½ inch, each	@ 18
Spruce plank 2 inch, each	@ 28
Spruce, wall strips, each	@ 12
Hemlock boards, each	@ 15
Hemlock boards, 4x6, each	@ 34
Hemlock joists, 2½ x4, each	@ 14
Hemlock wall strips, 2x4, each	@ 11
Hemlock plank, 2 inch, each	@ 30
Black Walnut, good, $\frac{3}{4}$ m.	75 00@85 00
Black Walnut ¾ inch, $\frac{3}{4}$ m.	75 00@78 00
Black Walnut ¾ inch, $\frac{3}{4}$ m.	75 00@80 00
Black Walnut, ¾ inch, $\frac{3}{4}$ m.	33 00@35 00
Sycamore, 1 inch $\frac{3}{4}$ m.	30 00@32 00
Sycamore, ¾ inch $\frac{3}{4}$ m.	65 00@68 00
White wood, chair plank, $\frac{3}{4}$ m.	38 00@45 00
White wood, 1 inch, and thick, $\frac{3}{4}$ m.	35 00@40 00
White wood, ¾ inch, $\frac{3}{4}$ m.	38 00@43 00
Ash, good, $\frac{3}{4}$ m.	25 00@30 00
Ash, second quality, $\frac{3}{4}$ m.	25 00@30 00
Oak, good, $\frac{3}{4}$ m.	38 00@45 00
Oak, second quality, $\frac{3}{4}$ m.	25 00@30 00

Cherry, good, Ψ m.....	60 00@70 00
Cherry, common, Ψ m.....	25 00@35 00
Birch, Ψ m.....	25 00@30 00
Beech, Ψ m.....	20 00@25 00
Basswood, Ψ m.....	22 00@25 00
Hickory, Ψ m.....	40 00@45 00
Maple, Ψ m.....	22 00@30 00
Chestnut, Ψ m.....	40 00@45 00
Shingles, shaved pine, Ψ m.....	@ 7 75
Shingles, do, 2d quality, Ψ m.....	@ 6 00
Shingles, extra sawed pine, Ψ m.....	5 50@ 5 75
Shingles, clear sawed pine, Ψ m.....	@ 4 50
Shingles, sawed 3d quality, Ψ m.....	2 50@ 2 75
Shingles, cedar, Ψ m.....	3 00@ 5 25
Shingles, hemlock, Ψ m.....	@ 3 00
Lath, hem'ock, Ψ m.....	@ 2 00
Lath, spruce, Ψ m.....	@ 2 12
Lath, pine, Ψ m.....	@ 2 50

CHIPPEWA CROSSING.

How the Country Along the Line of the Central is Settling Up With Hardy Pioneers.

From the Ashland Press.

The *Press* has before made mention of the fact that a thrifty settlement of farmers is progressing favorably in the vicinity of the Chippewa river, where the Central crosses that stream in Ashland county. The settlement is in townships 42 and 43, range 2. The road crosses in section 1, where there is an excellent water-power, and where it is expected a town of no little importance will spring up when the road is completed through to Ashland from its present northern terminus. The land in these two towns is high, rolling, well watered and quite heavily timbered with sugar maple, elm, some oak, mixed with large, heavy white pine. The soil is excellent, and there is plenty of government land yet open to homesteaders. Already twenty-three families have commenced homes, in fact a good beginning has been made in the way of opening up farms, the settlement averaging four acres to family in root crop this year. The crops look well, and are growing finely.

The land lies all the way from the railroad track back two or three miles, all of the same general character, and Mr. F. S. Woodnorth, one of the leading spirits of the new settlement, informs us that he locates all new comers on homesteads free of

charge. As he is an experienced woodsman, this offer is being taken up every few days. He informs us that some thirteen families from Waupaca county have signified their intention to move in this fall, and he is to locate them immediately upon their arrival.

The settlement is twelve miles from from the south line of our county and fifteen miles south from Penoka Gap.

Application has been made to the town board for the laying out of a road from Penoka to the Chippewa, and the board has authorized Mr. C. H. Pratt, county surveyor, to proceed with the survey, and he will do so about the middle of the present month. This will give the settlers an outlet to Ashland, and bring considerable business to this point during the coming winter. A good road is already open from the settlement south to Chippewa Falls.

The people will soon be numerous enough to form a town government of their own, and probably by another year will, if prosperous, ask for a division, which will undoubtedly be granted. As it is, we learn that they desire to participate in the general fall election, and will ask for a voting precinct. They have already some twenty-five voters, and that number will be greatly increased by new arrivals before November.

There are quite a number of Ashlanders in the new settlement, and we are glad to learn that they are well pleased with their location, and are making good progress. Among them are R. M. Dryden, and E. B. McLean, both of whom have fine homesteads. We wish for these hardy pioneer unbounded success, and hope soon to be able to visit them in the cars.

JOHN PAUL'S mill at La Crosse, Wis., recently sawed 800 logs in ten hours and forty-eight minutes. The amount of lumber sawed was 85,000 feet. The mill is a rotary.

WORMS IN TIMBER.

The worm that produces what is known as powder post in hickory or oak is not indigenous to the wood, neither is it the same insect as the borer, although operating at the same time and in a similar manner. The borer is the least troublesome, as it will not deposit its eggs where the bark is removed, but the insect that produces the powder post worm will deposit its eggs in the interstices of the surface, and, after the worm is hatched, it works in seasoned as well as partially seasoned timber, always following the porous strata of the wood. Experienced has shown that the ravages of these worms may be greatly checked, if not entirely prevented, by cutting the tree at the time of year when it contains the least sap. The practice is, of course, governed by the locality, the safest time being the two months following the fall of the leaves. At this period the wood is more compact than at any other, and there is less substance for the worm to subsist on. Some object to cutting the timber at this season, on the ground that it is not as tough and heavy as when cut in the early spring, and they claim that the ravages of the insect may be prevented by removing the bark and placing the timber in a dark place until it is well seasoned. Steaming will kill all in the wood at the time, but, if not properly guarded against, there is the same probability of the insect depositing its eggs as when the timber is filled with sap. The question as to what will entirely prevent powder post, although often discussed, is as far from being solved as ever; almost every person handling the wood has a different opinion, but we believe that if cut and treated as we suggest there will be but little difficulty experienced from these worms. — *Carriage Journal.*

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160 acres in sec. 10, 22, 24, 34.....	T. 137, R. 33	380 acres in sec. 3, 22, 24, 26.....	T. 40, R. 29
160 acres in sec. 6, 11, 13, 14, 24, 25, 33, 34.....	T. 133, R. 25	320 acres in sec. 6, 10, 28, 34.....	T. 51, R. 26
877 acres in sec. 6, 11, 13, 14, 24, 25, 33, 34.....	T. 137, R. 33	360 acres in sec. 10, 14, 26, 34.....	T. 51, R. 27
160 acres in sec. 8.....	T. 131, R. 30	320 acres in sec. 14, 22, 26, 30, 34.....	T. 53, R. 26
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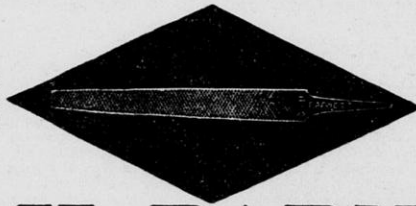
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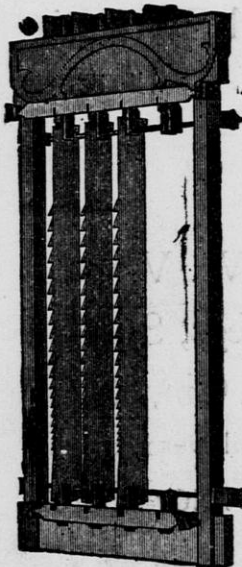
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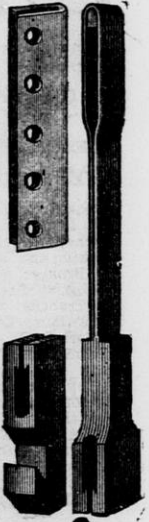
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
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33x44 inches, 5, 6, 8 and 10 sheets to bundle.
 19x29 " 20, 25, 30 and 35 sheets to bundle.
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Nos. 5 and 6 are about $\frac{1}{4}$ of an inch thick, and are those most used, and will usually be found the most available for all purposes. For mill men and machinists, for pulleys and packing, and to founders for raising patterns, this article is almost indispensable, and in all our experience we have never found parties, who having used it, would return again to the use of wood, rubber or leather.

The following parties have used it largely, and will doubtless recommend it to all who may inquire regarding it:

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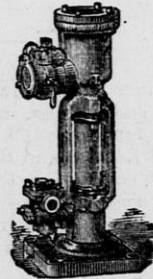
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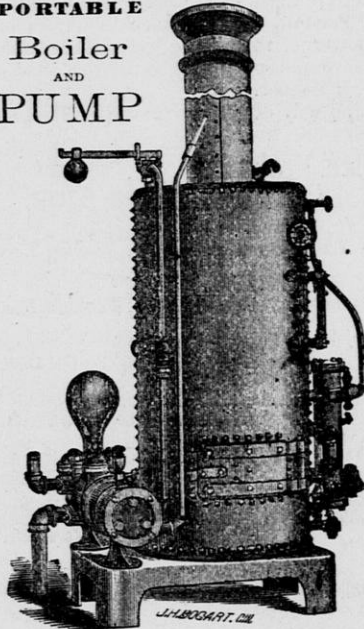
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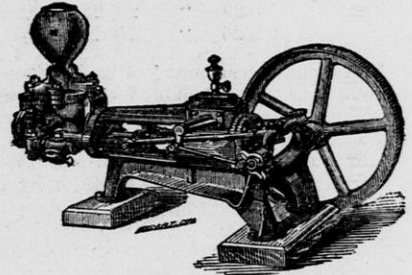
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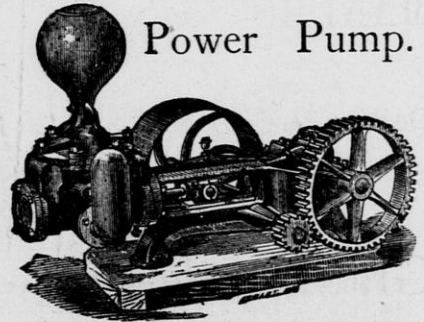
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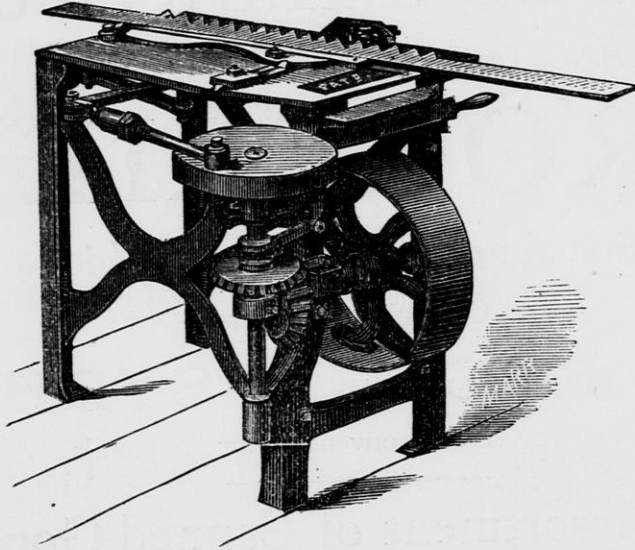
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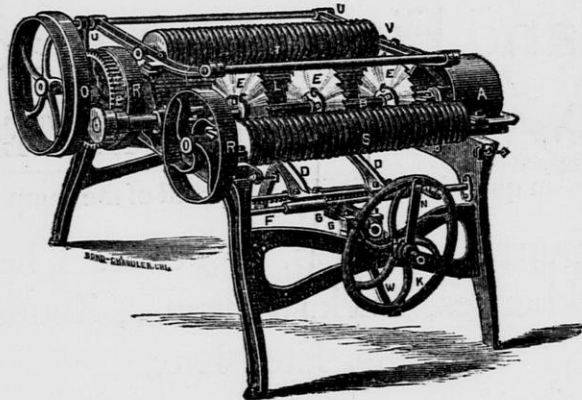


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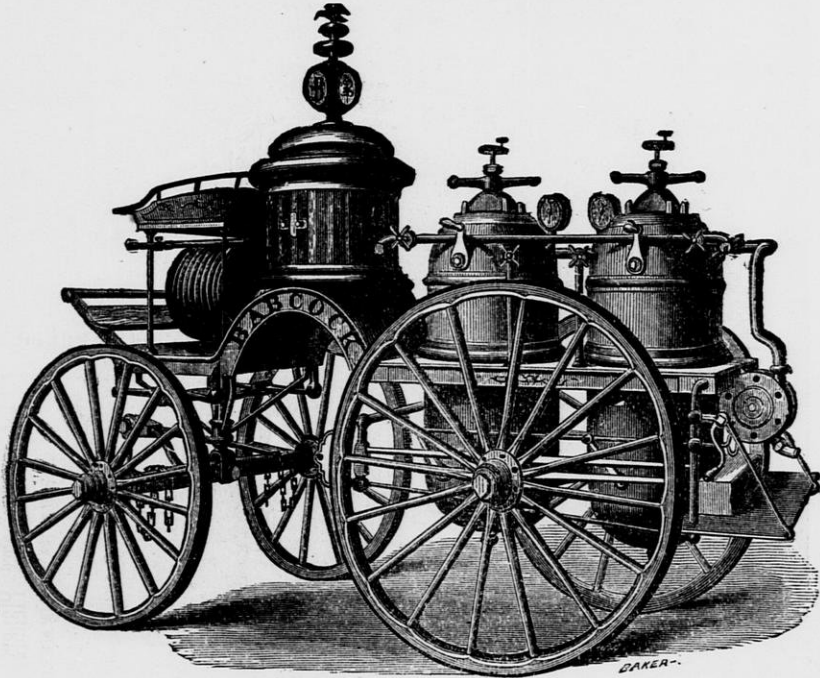
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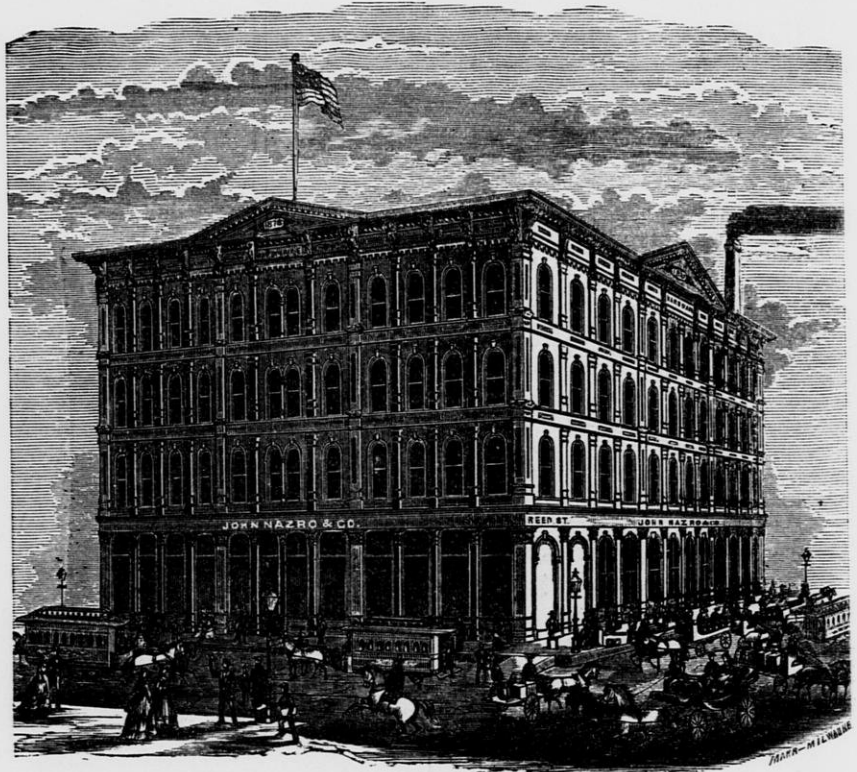
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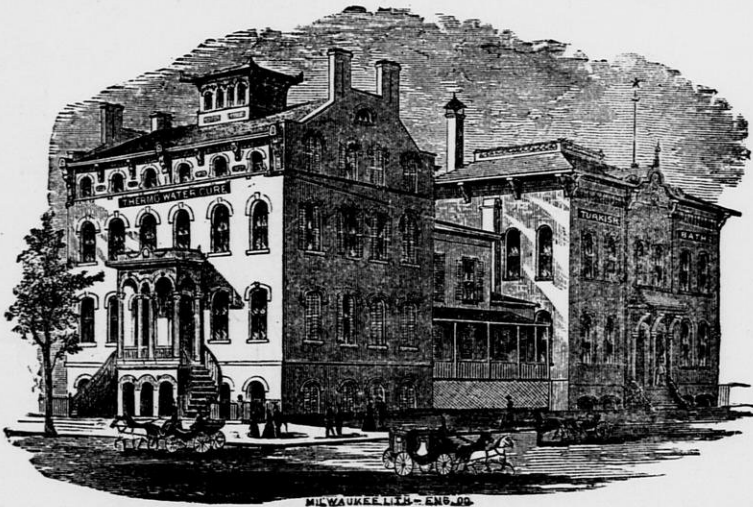
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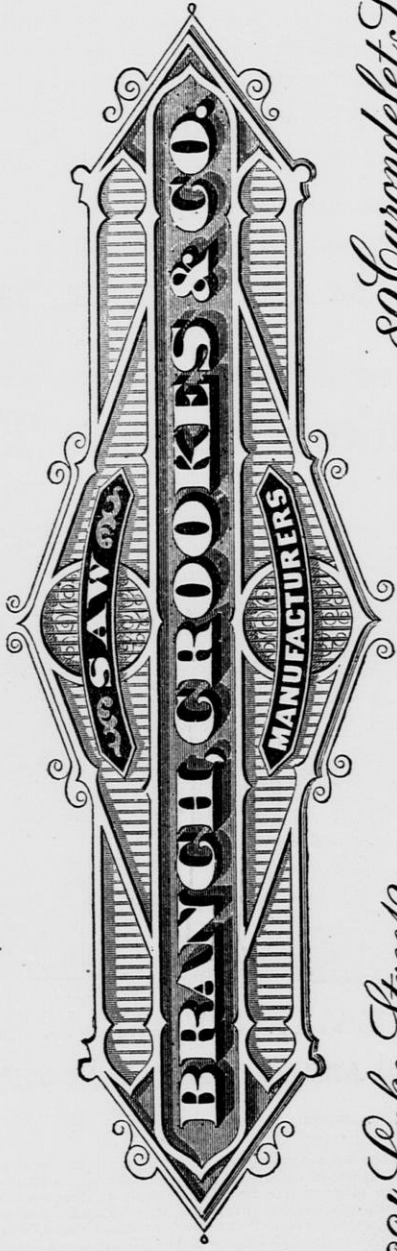
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NEW ORLEANS.

LUMBERMEN'S REGISTER.

The Lumbermen's Register is a special feature of THE WISCONSIN LUMBERMAN. We have devoted much time and labor in obtaining and classifying the names of the lumbering firms of Wisconsin, Michigan, Minnesota, Iowa, Nebraska, Missouri, Kansas and Chicago. The Register may yet be incomplete, but it is as perfect as we have been able to compile it up to the present date. We ask, now, that lumbermen send us any corrections or additions that will assist us in making the Register absolutely perfect, and that they will send us notice of new firms formed or old ones dissolved. We want the name of every reliable firm. Assist us in obtaining them. In our classification it will be noticed that in Missouri, Kansas and Nebraska, the term "saw mill" is used in many instances; the term refers to the local hard-wood mills. We have classed the manufacturers as manufacturers and dealers, because it is generally understood that saw-mill proprietors are at least wholesale dealers.

GENERAL CLASSIFICATION.

m and d.....	Manufacturers.
d.....	Wholesale and Retail Dealers.
s m.....	Shingle Manufacturers.
p m.....	Planing Mills.
Sash, doors, &c.,.....	Manufacturers of Sash, Doors, &c.
Saw mill.....	Hardwood Mills.
Staves.....	Stave Manufacturers.
Logger.....	Jobber or logger who sells his logs or has them sawed by custom sawing.

Our Register is more incomplete in reference to loggers than to any other class of lumbermen. That department will be perfected as rapidly as we can obtain the names.

WISCONSIN.

Upham Chas M & Bro m and d.....	Angelica	Cary Bros m and d.....	Auroravill
McCartney D m and d.....		Flower J H.....	Bango
Oleson & Co m and d.....		Obrecht Christian d.....	Baraboo
Clinton McLaren & Co m and d.....		Bassett Wm P staves.....	
Hall A & Co m and d.....	Ahnapee	Pratt s m.....	
Brammer Henry & Co m and d.....		Baraboo Manufacturing Co.....	
Young D m and d.....		Wolcott W W sash, doors, etc.....	
Sawyer P m and d.....	Algoma	Bailey D R.....	Baldwin
Reynolds & Tibbetts m and d.....	Appleton	Ham Henry sash, doors etc.....	
Lederer B W sash doors etc.....		St. Louis & Wisconsin River Co.....	Barnum
Spaulding G W & Co staves.....		Woodford & Davis m and d.....	Barton
Whorton Bros m and d.....		R D Pike m and d.....	Bayfield
Rose & Heath.....		Townsend & Co, d Spring c Second.....	Beaver Dam
Door & Steele m and d.....		Gratiot E H d.....	Belmont
Yorker S J d.....	Arena	Gray James p m.....	Beloit
Goodrich J & Co logger.....	Augusta	Weed J H & Co d.....	
Ball J L d m.....		Peck S W d.....	
Stone J F & Son m and d.....		Talbot H G d.....	Berlin
Randall S logger.....		Cohn L S m and d.....	
Bowen E.....	Albany	Dammond & Co m and d.....	Big Lester Bay
Ashland Lumber Co m and d.....	Ashland	Bates Geo d.....	Black Earth
E Ingalls & Co m and d.....		Ward G S & Bro d.....	
White & Dunbar, sash, doors, etc.....		Hurlburt W D m and d.....	Black Brook
S S Vaughn m and d.....		Price W T logger.....	Black River Falls

Bright & Wither loggers.....	Black River Falls	Knapp, Stout & Co m and d (Menomonee),	Dunnville
Merrill L G m and d.....		Baker & Lee d.....	Elkhorn
Elliott A m and d.....		Larson & Olsen m and d.....	El Paso
Ice J logger.....		Eau Claire Lumber Co m and d.....	Eau Claire
Spaulding D J m and d.....		Rathbone N S logger.....	
Bump Mark logger.....		Rundle & Free sash doors etc.....	
Burchard Harrison logger.....		Wheaton Lumber & M'fg Co m and d.....	
Porter W B logger.....		Northwestern Lumber Co m and d.....	
Sawyer A E logger.....		Bangs & Fish p m.....	
Dickson John and James.....	Bloomington	Boyd A m and d.....	
Barron John.....	Blue Mills	Burdett, Preston & Co m and d.....	
Briggs & Barnes.....	Boaz	Estabrook W B m and d.....	Eau Claire
Bucker A.....	Buffalo	Ingram & Kennedy m and d.....	
Rouch & Erding.....	Bonduel P O	Graham, White & Co m and d.....	
Somers W & Bro m and d.....		Pinkham J P m and d.....	
Schwahl & Somers m and d.....		Robson John m and d.....	
Nelson H & Co d.....	Boscobel	Daniel Shaw & Co m and d.....	
Weston, Miner & Co m and d (Necedah).....		Smith & Buffington m and d.....	
Pierce & Sly m and d.....	Branch	Tarrant E m and d.....	
Yorty J & Kripp d.....	Brandon	Wilcox & Co m and d.....	
Beach & Bishop d.....	Brillion	Carson & Rand m and d.....	Eau Galle
Bowen E d.....	Brodhead	Week John m and d.....	Eau Pletne
Thompson C C d.....		Hutchinson & Bro m and d.....	
Lamson C & Co d.....		Brown R R d.....	Edgerton
Usher & Hassinger d.....		Huntley & Co d.....	Elroy
Blake Francis W d.....	Burlington	Webster & Palmer m and d.....	Embarass
Stevens & Lyons d.....	Burnett Junction	Mather & Lowrie d.....	Emery
Fay C B & Co m and d.....	Casco	Isabelle Mill Co m and d.....	Esdaile
Horn F W m and d.....	Cedarburg	Foot, Foster & Co m and d.....	Eureka
Hilgen & Son m and d.....		Avery A H m and d.....	Excelsior
Wehausen Henry m and d.....		Mosier W S m and d.....	
Deniston J C d.....	Cadiz	Pearson & Pake m and d.....	
Deniston C R d.....		Long, Henderson & Coe m and d.....	Fairchild
Staves J M d.....		Randall, Simeon d.....	Fall Creek Station
Neff D d.....	Calamine	Anderson C B d.....	Fall River
Bock Chas d.....	Calumet	Fiffeld E d.....	Evansville
Myers Jas d.....	Cambria	Johnson D & Co d.....	
Tisch Chas d.....	Carlton	Mack H & Bro m and d.....	Evanswood
Stephens Daniel B d.....	Cassville	Cook & Foster m and d.....	Fort Howard
Harris Bros m and d.....	Cato	Lamb, Watson & Co m and d.....	
Rix Bros m and d.....	Cedar Creek	C Schwartz & Co sash doors etc.....	
Edwards J & Co m and d.....	Centralia	Laird J. P. & Co m and d.....	
Garrison O & Co m and d.....		Gray Oscar m and d.....	
Lefevre H.....		Griffith J Q & Son m and d.....	Fond du Lac
Lyon R C s m.....		Riley & Bosworth loggers.....	
Clark & Scott m and d.....		Hamilton I K & W C loggers.....	
Graves James m and d.....	Charlestown	Fond du Lac Mfg Co m and d.....	
Union Lumbering Co m and d.....	Chippewa Falls	Lewis & Steenberg sash doors etc.....	
Friest, Coburn & Co p m.....		McCourt E sash doors etc.....	
Withrow & McKea sash doors etc.....		McDonald & Stewart sash doors etc.....	
Marriet, La Beulf & Co loggers.....		Parker N & Co d.....	
Vincent, Monelert & Co loggers.....		Stevely & Higbee p m.....	
Clark Ira m and d.....	Clark's Mills	McDonald John logger.....	
Hilt & Davidson m and d.....	Clay Bank	Wiley Dr logger.....	
Tuft Jas shingle dealer.....		Gainer James logger.....	
Lampheer H P d.....	Clinton	Chicago & N W Co's mill m and d.....	
Wilcox Bros & Co d.....		Webster N D logger.....	
Colby Mill Co m and d.....	Colby	Meyer Charles J L sash doors etc.....	
Graves J S m and d.....		Merryman & Co m and d.....	
Bond A D d.....	Columbus	McDonald Alexander m and d.....	
Long & Henderson d.....		Sexmith G W m and d.....	
F. F. Farnham d.....		Moore, Galloway & Baker m and d.....	
Aldrich V M d.....	Cooperstown	Parker N & Co.....	
Wright P & Bro m and d.....	Coral City	Mihills U D & Co sash doors etc.....	
D J Walker d.....	Danville	Hamilton & Finley m and d.....	
James T & Co d.....	Darlington	Hunter George logger.....	
Carpenter H N d.....		Curtis & Cornish d.....	Fort Atkinson
Woodward T saw mill.....		Wilcox, Southwell & Co d.....	
Clark H d.....	Deansville	Matthales F & C m and d.....	Fountain City
Ross H J & Co d.....	Delevan	Bowman W m and d.....	Frankfort
Gormley Watson & Co d.....	Delevan	Arpkee F m and d.....	Franklin
Blake Samuel m and d.....	DePere	Archer & Johnson m and d.....	Frankville
Smith B. F. m and d.....		Arnold G M m and d.....	
Reid A. p m.....		Cooley & Race m and d.....	Fredonia
McLelland John m and d.....		Cooley & McEvoy staves etc.....	
Marsh G S m and d.....		Bergtresser L m and d.....	Fremont
Ritchie James m and d.....		Brickley John m and d.....	
Monroe John m and d.....		Edwards J & Co m and d.....	Frenchville
Struthers Thomas sash doors etc.....		Sterns & Son staves.....	Galesville
Hiles G m and d.....	Dexterville	Freeman A W d.....	Genoa
Remington H W m and d.....		Arnold J m and d.....	Germanstown
Worth C M & A R s m.....	De Soto	Natchway H.....	Gibson
Kinney Francis m and d.....	Durand	Olds & Lord m and d.....	Glenmond
Plummer & Morse m and d.....		Freeman O. & W. d.....	Genoa Junction
Hoard & Earl d.....	Doylestown	Stewart Bros d.....	Genesee

Arpen A logger.....	Grand Rapids	Nevins S L m and d.....	LaCrosse
Butler & Smith sash doors etc.....		Paul John m and d.....	
Edwards John & Co m and d.....		Polleys W H logger.....	
Hertel Fred p m (Centralia).....		Root W C logger.....	
Trahern W C.....		Sill Wm R logger.....	
Arpen J logger.....		Vincent & Edwards d.....	
Byron F m and d.....		Washburne C O m and d.....	
Clark & Scott m and d.....		Weston R S m and d.....	
Meehan P & J m and d.....		Emery T B logger.....	
Neeves Geo & Son m and d.....		Goddard H logger.....	
Rat. 'n John m and d.....		Hankerson A H logger.....	
Roe & Butterfield m and d.....		La Crosse Lumber Co m and d.....	
Scott 'n B m and d.....	Grand Rapids	Mitchell A S p m.....	LaCrosse
Whipple E S m.....		Ross Robert m and d.....	
Weed Lumber Co m and d.....		Barron John m and d.....	Lafayette
Hickerson N H.....	Grantsburg	Robson John m and d.....	
Graves J A m and d.....	Gravesville	Sanford G P & Co d.....	Lavalle
Modlin Henry.....		Leigh J m and d.....	Little River Mills
Earle & Case s m.....	Green Bay	Mikel John James m and d.....	Little Wolf
Willard Lamb m and d.....		Gardner & Co m and d.....	Little Suamico
McIntosh C E s m.....		Conn A C & Co m and d.....	
Lamb, Watson & Co m and d.....		Olsen Geo & Co.....	
Woodruff J W & Co m and d.....		Zeider L.....	Lomira
Holmes & Thompson m and d.....		Snow W H d.....	
Anton Burkhardt p m.....		Vaedsch & Runkle.....	Lowell
Klaus Anton m and d.....		Smith D F m and d.....	Luck
Marshall & Darling s m.....		McMillan A d.....	Lyndon
Herling Theo m and d.....	Green Bush	Eighmy Freeman d.....	McFarland
Sultz, Lewis & Henry m and d.....		Bunker & Vroman d.....	Madison
Schmidt Adam m and d.....	Harrisville	Sorenson & Frederickson p m.....	
Ewing Thos m and d.....	Hartford	Stein C R d.....	
Mills J D d.....	Hartland	Taylor C L staves.....	Maiden Rock
King P & Son d.....	Helena	Cooper & Jones.....	Manitowoc
Tripp N D d.....	Hillsborough	Woerfel E staves.....	
Fisher J.....	Horicon	Guyles & Parkratz d.....	
Briggs & Son m and d.....	Hortonville	Hubbard H F d.....	
Gowell, Logan & McMurdo m and d.....		Zander & Co p m.....	
Redout Bros sash doors etc.....		Klingholz Charles m and d.....	Manitowoc Rapids
Whitman & Morse m and d.....		Pierce Plinn.....	
Baldwin D A m and d.....	Hudson	Reune Chas m and d.....	Maple Works
Palmer H G & Co m and d.....		Brayton L J d.....	Marquette
White & Jones sash doors etc.....		Green J S d.....	
King G W logger.....	Humbird	Hamilton, Merryman Co m and d.....	Marinette
J Kablin pail and tub factory.....	Hurleyville	Tweedie & McMaster p m.....	
Roberts John d.....	Iron Ridge	Menominee Mfg Co m and d.....	
Blair J d.....	Janesville	Spaulding, Houghtaling & Johnson m and d.....	
Fifeild, D F d.....		McCarty Wm m and d.....	
Lovejoy & Blount d.....		N Ludington Co m and d.....	
Jeffries David d.....		Whitbeck H Co m and d.....	
Schutt U d.....		Bartlett L H d.....	Marshall
Hitchcock & Reind d.....	Jefferson	Craig & Maroney sash doors etc.....	Mauston
Andrews F M & Co m and d.....	Jenny	King Walter staves.....	
Matthews Thos m and d.....		Webster C m and d.....	Maxville
Jewett A S & Sons m and d.....	Jewett's Mills	Bronson D W d.....	Mazo Manie
Sutherland Sol.....	Juda	Hewitt Henry, Jr logger.....	Menasha
Knapp J R d.....	Juneau	Mitchell, Watkie & Co sash doors etc.....	
Taber J B & Co.....	Kansasville	Potter & Dutchman m and d.....	
Backus N G d.....	Kenosha	Schneider & Ruth p m.....	
Harrison W M p m.....		Spaulding, Houghtaling & Johnson m & d.....	Menakaune
Head & Southerland d.....		Stephenson T & Co m and d.....	
Grant & Son, Market d.....		Kuapp, Stout & Co m and d.....	Menomonee
Tuesdell Gideon, 3 Main d.....		Brand & Christmann m and d.....	Montpeller
Hitchcock & Mashek m and d.....	Kewaunee	Baldwin m.....	
Slauson, Grimmer & Co m and d.....		Bainbridge W.....	Mifflin
Stranky W m and d.....		Harker & Bainbridge.....	Mifflin
Dikeman & Latimer s m.....		Greene N S & Co.....	Milford
Walker, Munger & Co sash doors etc.....	Kilbourn City	Brown & Evans m and d.....	Mills Centre
Britton C W m and d.....	Kinnelkinnic	Dunham L m and d.....	
Brook V logger.....	Knowlton	Lucas & Bro m and d.....	
Wallace & Redford m and d.....		Wight S s m.....	
Cloespeck M m and d.....	Kosuth	Greenman R J d.....	Milton Junction
Kellnor M m and d.....		Hutchinson James d.....	Mineral Point
Black River Improvement Co.....	LaCrosse	White S d.....	
Hogan & Chamberlain loggers.....		Weyhausen A m and d.....	Mishicot
McDonald Bros loggers.....		Williams J W saw mill.....	Monroe
Salzer G. J.....		Loos Charles d.....	Merrimack
Crosby W. W m and d.....		Dodge, Churchill & Co p m.....	
Coleman C L m and d.....		Dodge & Davenport d.....	
Gle & Holway m and d.....		Rood J L d.....	
Moorer R M logger.....		Dessert J R m and d.....	Mosinee
Bright & Withee m and d.....		Kronenwetter S m and d.....	
Lill & Fourero m and d.....		Garland J d.....	Muscoda
Hewett & Woods m and d.....		Bull & Bowers.....	Muskego Centre
Hixon & Withee m and d.....		Houghton Geo G & Co m and d.....	Milwaukee
A & D D McMillan loggers.....		Schroeder & Steinman, dealers.....	

Ernst Herzer, Planing mill.....	Milwaukee	Culver E d.....	Ontario
Wm. Willer, planing mill.....		Lovejoy & Richards d.....	Oregon
H. Jalass & Co., planing mill.....		Harris D d.....	Orfordville
Brockhaus & Bradley, planing mill.....		Johnson H & Co m and d.....	Omro
Nic. Schuh & Son, dealers.....		Morton, Arnold & Morton p m.....	
Rodway, Conway & Co, p m sash, drs, etc		Webster & Foster m and d.....	
Sanger, Rockwell & Co, sash, drs etc, p m		Wilson A m and d.....	Owega
Engelmann, Babcock & Salling, m and d		Foster N C m and d.....	Onalaska
Ewing Thos K commission.....		Hall Chas s m.....	
Weston Bros, manufacturer and dealer...		Hayden L D (La Crosse Wis).....	
Mayhew Bros d.....		Moore R M (La Crosse Wis).....	
Durr & Rugee d.....		Nichols Chas H & Co m and d.....	
Schmidt & Reichel d.....		Bradley C G m and d.....	Osceola
Judd T H & Co d.....		Stapels C H logger.....	
Comstock L & Co m and d.....		Dresser & Wilson m and d.....	
Chandler Walter S d.....		Talboys & Hanscome m and d.....	
Seyfried Martin d.....		Knapp L E m and d.....	Ostkosh
Brembach Fred d.....		Neff A & Co p m.....	
Mabbett & Foster d.....		Chapman L C & Co p m.....	
Simpson E. B & Co commission.....		Thompson A p m.....	
Pierce R. W. & Co d.....		Vandercook & Furgerson p m.....	
Merrill Bros m and d.....	Merrillan	Gould J P sash doors etc.....	
Ketchum H & Co m and d.....		Porter & Batts sash doors etc.....	
Warren J M logger.....		Jenkins J & Co m and d.....	
Hayden A S logger.....		Harris M m and d.....	
Clark S & Son logger.....		Osborn & Christenson s m.....	
Merrill L G m and d.....		Conlee Bro & Co m and d.....	
Austin G A & Co m and d.....	Neillsville	Lane C & W logger.....	
Gallaher L W sash doors etc.....		Gill & Son loggers.....	
Gille & Halloway m and d (La Crosse Wis)		Freeborn John logger.....	
Kellogg A S.....	Neshoto	Turner Bros contractors.....	
Cooper Jones & Co m and d (Two Rivers Wis)		Sturtevant & Son contractors.....	
Cooper, Myers & Co.....		Stevenson Chas logger.....	
Cooper & Jones.....		Danforth Joseph logger.....	
Raymond & Jones.....		Reynolds Paul contractor.....	
Lamb W.....	New Franklin	Jewell, Lawrence & Co loggers.....	
Bradford, McCoy & Co m and d.....	Necedah	McNair Jas logger.....	
Fuller & Co sash doors etc.....		Doughty & Bro loggers.....	
Burch G B & Co m and d.....		Streeter Geo logger.....	
Dill M B & Co s m.....		Rockwell & McCord loggers.....	
Shorey P & Bro m and d.....		Bray & Chotez loggers.....	
Weston T & Co m and d.....		Lynch John logger.....	
Sherry Henry d.....	Neenah	Als & Fitzgerald loggers.....	
Sanford J B p m.....		Rumery & Kellogg loggers.....	
Hewitt & Woods m and d.....	Neillsville	Miller L J logger.....	
Clark, Eyerly & Breed, m and d.....		Fuinely & McDonald logger.....	
Weston & Schofield, loggers.....		Eighme R P logger.....	
Boardman & Palmer m and d.....		Stevenson, Badgett & Co m and d.....	
King G W m and d.....		Williamson G M & Co p m.....	
Green A logger.....		Wetherby David logger.....	
Lindsley F D logger.....		McAllyster J P logger.....	
Putnam L G d.....	Neosho	Hanson W E logger.....	
Smart J & E (manufacturers bridge).....	New Lisbon	Crowell & Son logger.....	
Hale & Springsted m and d.....	New London	Webb, Albert & Co s m.....	
Dixon H S m and d and staves.....		Myers & Van Every s m.....	
Dougherty, Delano & Demming sash doors etc.....		James & Stille d.....	
Ketchum H m and d (Merrilan Wis)...		Lines, Libbey & Co p m.....	
Jacobs E P m and d.....	New Richmond	Morgan Bros m and d.....	
Johnson Bros m and d.....		Weed J H & Co m and d.....	
Pierce & Son m and d.....		Fraker J S s m.....	
Brown J & Co m and d.....	Northport	Spalding & Peck m and d.....	
Wisconsin Mnf Co m and d.....		Campbell Wm & Sons m and d.....	
Putnam & Blair sash doors etc.....	Oakfield	Libby D L & Co m and d.....	
White J T & Co p m.....		Regan, Cheney & Pratt m and d.....	
Streeter J & A C & Co d.....	Oconomowoc	Doe & Miller m and d.....	
Roll & Turnham p m and sash doors etc		Ripley & Mad m and d.....	
Vilas G d.....		E. C. Kellogg logger.....	
Woodruff Bros d.....		John A. Paige Pres Wolf River Broom Co..	
Livermore & Co m and d.....	Ogdensburg	Durby & Curran s m.....	
Brunquest W m and d.....	Oconto	McMillan R. & Co m and d.....	
Flanders W B logger.....		Sawyer P & Son m and d.....	
Goodrich T B logger.....		Raine R N & Co m and d.....	
Luby logger.....		Reed L B & O B m and d.....	
Orr, Newell & Co m and d.....		Sheldon L P & Son m and d.....	
Jacob Spies m and d.....		Laabs J & Co m and d.....	
Leigh John m and d.....		Buckstaff Bros & Chase m and d.....	
Oconto Lumber Co m and d.....		Foster & Jones m and d.....	
Comstock & Simpson m and d.....		Henderson & Wilson d.....	Palmyra
Holt, Balcom & King m and d.....		Mitchell Bros d.....	
Pierce L M p m and sash doors etc.....		Gray A D m and d.....	Pepia
Winslow, England & Co m and d.....		Peshtigo Co m and d.....	Peshtigo
Loosey Chas d.....	O'Kee	Prutzmann Henry d.....	Pewaukee
Vanderpool & Clark d.....		Frisbee & Westover d.....	Pine River
Woodley Samuel d.....		Gratiot E H d.....	Platteville
		Lovelson F m and d.....	Plum City

Bowman G M d.....	Plymouth	Stafford L B.....	Staffordville
Mc Graw E M & Co d.....		Bailey D C logger.....	Stevens' Point
Wentworth, McGregor & Co d.....	Portage City	Blake & Mitchell loggers.....	
Carnegie A p m.....		Benson P & Bro loggers.....	
Lyon D B & Son d.....		Burns, Thompson & Co m and d.....	
Neavel & Davis d.....	Potosi	Boynton N m and d.....	
Schneider Joseph d.....		Brown E D m and d.....	
Jamison Hugh d.....	Poynett	Bean T G & Son m and d.....	
Reynolds & Lenfeldt p m.....	Prairie du Chien	Campbell P logger.....	
Smith & Foster m and d.....		Homestead Seth logger.....	
Weston T & Co m and d (Necedah).....	Prairie du Sac	Gilchrist A B logger.....	
Meacham & Bro p m.....	Prescott	Goodhue Geo J, Jr logger.....	
Green G d.....	Princeton	Hungerford Seely logger.....	
Gillon N.....	Pine Grove	Hutchinson & Bro m and d (Eau Pleine)	
Glawe C.....		Hubbard — shingles.....	
Bruce, Fuller & Co.....	Rock Falls	Karner S H m and d.....	
Garland & Nichols.....		Knox Bros m and d.....	
Peck S B & Son d.....	Racine	Meehan Bros m and d (Lluwood).....	
Driver Thos p m.....		McDill T & Bro m and d.....	
Kelly, Murray & Co d.....		McMillan & Sons m and d.....	
Kensie W D & Co sash doors etc.....		Moe Louis I logger.....	
Miner E B & Co sash doors etc.....		Lester & Plummer m and d.....	
Stawson Jas R & Co d.....		Park G L logger.....	
Itley & Wilson d.....	Randolph Station	Pike E L logger.....	
Tremble & Doud, State d.....		Perry I & J logger.....	
Cushman A G.....	Readstown	Rennie John logger.....	
Schofield & Co m and d.....	Red River	Robeson J M m and d.....	
E E Henderson m and d.....	Red Cliff	Reading & Van Order shingles.....	
Smith Timothy.....	Reedsburgh	Richardson Chas logger.....	
Snow W H d.....	Reeseville	Clifford Wm J logger.....	
Remington H W m and d.....	Remington	Rousseau M A m and d.....	
Rudolph C J.....	Richland Centre	Sherman S A m and d.....	
Richardson Mrs. W d.....	Richland City	Scott Bros m and d.....	
Learmouth J d.....	Rio	Sheekis Wm logger.....	
Barlow J B & Co d.....	Ripon	Walker & Wadleigh m and d.....	
Lanning A p m.....		Whitney Ebenezer logger.....	
Chinock J H s m.....	River Falls	Wade Geo & Co shingles p m.....	
Foss H W d.....	River Side	Welch Adam logger.....	
Shirland & Co s m.....	Robinson	O C Wheelock logger.....	
Pease D G m and d.....	Rockbridge	Callahan Chas logger.....	
Hawn Charles m and d.....	Rock Elm	Redfield John. logger.....	
Pedrick M d.....		Isherwood J & H logger.....	
Bowman Na m and d.....	Roundhill	Johnson J O logger.....	
Moore J P & Co d.....	Royalton	Martin John R logger.....	
Judd, Walker & Co m and d.....	Saint Croix	Clark Owen m and d.....	
Roberts George m and d.....	Sandy Bay	Cooper B F m and d.....	
Halasz Chas d.....	Sauk City	Cronkrite, Plummer & Co m and d.....	
Obrecht C d.....		Clements D R logger.....	
Cowles H K & Bro m and d.....	Scott	Cook Cornelius logger.....	
Girard & Co m and d.....	Seneca, Wood Co	Curran H & J D loggers.....	
Campbell Y d.....	Sharon	Severson S H d.....	Stoughton
Daniels G d.....		Turner O M d.....	
M H McCord logger.....	Shawano	Ardt F p m.....	Sturgeon Bay
Beecher L S logger.....		Wright Rufus m and d.....	
Miller, Mathias m and d.....		Anderson Geo.....	Seymour
Klebesadel & Miller m and d.....		McIntosh, Ross & Perry m and d.....	
C. D. Wescott logger.....		Callon Wm m and d.....	Sherman
Asa Hicks logger.....		Gray J m and d.....	
H E Howe, logger.....		Klaus & Wright m and d.....	Suamico
C. Crowley logger.....		Bruce J & Co.....	
C W Upham logger.....		Cook & Sons.....	
Hockner A d.....	Sheboygan	Trumble M E & Co m and d.....	
Thompson & Schroeder d.....		Gray O m and d.....	
Winters M d.....		Lamb, Watson & Co m and d.....	
Weeks A L d.....		Marshall & Co.....	
Haseltine C P m and d.....	Sherman	Weed A & Co m and d.....	
Kelly W P & Co m and d.....		Howard John D m and d.....	Superior
Bishop Bros staves and m and d.....	Sherwood	Peylon H M & Co m and d.....	
Nugent & Collins m and d.....		Angell W H & Son d.....	Sun Prairie
J. H. Parks logger.....	Shiocton	Eldred Anson m and d.....	Stiles
Mason, Barnes & Co m and d.....		Zimmermann W d.....	Theinville
W. D. Jordon m and d.....		Huct John.....	Trim Bell
Harriman Samuel m and d.....	Somerset	De Coursey M m and d.....	Trap River
Irwin O L, Maple d.....	Sparta	Gleason & Squires m and d.....	Tomah
Holden G B d.....		Warren & Gamble m and d.....	
Setson Bros p m.....		Barrett J M d.....	Trempeleau
Walker J H d.....		Reed Joseph.....	Tyrene
Farnum E B d.....	Springfield, Walworth Co	Mann Joseph & Co m and d.....	Two Rivers
Hopkins P G d.....		Cooper & Jones m and d (Manitowoc).....	
Bennett T m and d.....	Star	Goyt C.....	Ualo
De Jean T D & A W m and d.....		Foster N C s m.....	Upper Duck Creek
Seeley & Son m and d.....		Lucas J & Bro s m.....	
Kellogg & Son m and d.....	Stephensville	Hamlin & Ford d.....	Watertown
Wunderlich Z m and d.....		Bray, Robinson & Co d.....	Walde
Smith & Halsted Bros m and d.....	Stockbridge	Sibley C L d.....	

Whitney & Darling d.....	Waldo	Leahy Capt J logger.....	Wausau
Cooley C F & Co m and d.....	Waubeka	Lawrence & Peters loggers.....	Wausau
Howlett & Co p m.....	Waupaca	Manson Rufus m and d.....	Wausau
Payne & Co m and d.....		McCrosen Jas logger.....	Wausau
Smith & Foster.....	Wauzeka	Plummer B G m and d.....	Wausau
Lewellen & Lunn.....	Waterloo	Single Ben m and d.....	Wausau
Squires & Sheldon.....		Single Jas m and d.....	Wausau
Hamlin J H & Co d.....		Stewart A & J m and d.....	Wausau
Streeter J & A C & Co W Water d.....		Wenhime & Kickbush loggers.....	Wausau
Hammond Alfred.....	Waukechon	Zastrow Ed logger.....	Wausau
Simple A.....		Enderby & Austin staves.....	Wellington
Simple F.....		Mc Queen, Davis & Co d.....	Werner
Morse O A d.....	Waupun	Shell Bros d.....	West Salem
Hollendyke N d.....		Littlejohn A M d.....	Wausau
Richardson Silas d.....	Waukesha	Weed, Gummaer & Co m and d.....	Weyauwega
Kimball R N p m and s m.....		Nutt M E & Phillips s m.....	Winneconne
Dodd Sam ^l p m.....		Ingersoll, Rising & Co m and d.....	Wausau
Hartwell C M s, sh doors etc.....		Jones, Wellington & Co m and d.....	Wausau
Andrews & Parcher m and d.....	Wausau	McArthur & Co m and d.....	Wausau
Callon John T m and d.....		Starks, Stickles & Co p m.....	Wausau
Callon Wm m and d.....		Schultz C.....	Woodland
Ancult & Callon m and d.....	Wausau	Day C & Co m and d.....	Wrightstown
Allen Henry.....		George V. Brill p m.....	Wausau
Bernhard & Simpson loggers.....		Mc Kesson staves.....	Wausau
Clarke J C m and d.....		Converse H.....	Wyocena
Clark T W logger.....		Wells & Craig.....	Wyocena
Cohn & Curran m and d.....		King P & Sons d.....	Wyoming
Daniels H s m.....		McCutchen H d.....	Wausau
Miller Hermann logger.....		Haverson & Peterson m and d.....	Yankeetown
Kickbush & Bro loggers.....		Twing A.....	Wausau

MICHIGAN.

Hoxie L S m and d.....	Acme	Au Sable Lumber and Shingle Co m and d.....	Au Sable
Headley John.....	Ada	Backus & Bros m and d (Detroit).....	Detroit
Raker D M d.....	Adrian	Charles Stone Timber Co (Detroit).....	Detroit
Berry James m and d.....		Colwell Smith & Langstaff m and d.....	Wausau
Maxwell A & Co p m.....		Glennie J W m and d.....	Wausau
Wright Peter m and d.....	Alamo	McDonald D A.....	Wausau
Cosad & McGregor.....	Albion	Moore Alger & Co m and d (Detroit).....	Detroit
Haynes & Beard m and d.....	Alcona	Moore & Tanner.....	Wausau
Folkerts F C & Co m and d.....	Algonac	Vaughan S.....	Wausau
Smith A & S S m and d.....		Richardson J C m and d.....	Auster City
Allegan Mfg. Co p m.....	Allegan	Wilson H D s m.....	Auster City
Bass R.....		Hawley A M.....	Averill's Station
West N B sash doors etc.....		Miller A & G m and d.....	Wausau
Roberts Richard m and d.....	Allendale	Steele C s m.....	Wausau
German & Dewey m and d.....	Allens	Kroetzer G & Co p m.....	Bainbridge
Wright Ira.....		Babecock Surret & Co m and d.....	Baltimore
Winchester & Parish staves.....		Crutcher G W m and d.....	Wausau
Pierce Hall & Ward m and d.....	Alma	Childs E J sash doors etc.....	Bangor Van Buren Co
Wise & Co sash doors etc.....	Almena	Coombs & Smiley m and d.....	Wausau
Farnum Rufus K m and d.....	Almont	Green & Thompson m and d.....	Wausau
Bewick Comstock & Co m and d.....	Alpena	Nyman J H m and d.....	Wausau
Campbell Potter & Co m and d.....		Moore Smith & Co m and d.....	Banks Bay Co
Davis D G & Co s m.....		Taylor & Moulthrop m and d.....	Wausau
Doane Bingham & Co sash doors etc.....		Keystone Lumber Co m and d.....	Wausau
Fletcher A F & Co m and d.....		Bendry James m and d.....	Baraga
Folkerts & Butterfield m and d.....		Buck Hoyt & Co p m.....	Battle Creek
Gilchrist Frank m and d.....		Dwinell Pettee & Edwards sash doors.....	Wausau
Hough Hillard & Co m and d.....		Ellison H H & Co d.....	Wausau
Mason Luce & Co m and d.....		Halbert & Knight sash doors etc.....	Wausau
Minor J S & Co shingles.....		Leggett S L p m.....	Wausau
Morse H K.....		Mason Rathbon & Simmons d.....	Wausau
Prentise Geo & Co m and d.....		Avery Murphy & Co m and d.....	Bay City
Richardson Avery & Co m and d.....		Ames Bros m and d.....	Wausau
Richardson Arthur B.....		Archibald & Bradley m and d.....	Wausau
Richardson Chas W.....		Bradley H M & Co m and d.....	Wausau
Richardson Geo.....		Bradley N B & Co m and d.....	Wausau
Spratt Aug.....		Carney R J commission.....	Wausau
Spratt Frank.....		Carney T sash doors etc.....	Wausau
Cummings Geo W s and m.....	Arnsden	Carrier John & Co m and d.....	Wausau
Ferdon John & Son d.....	Ann Arbor	Chapin & Barber m and d.....	Wausau
Krapp Conrad d.....		Chapman G P & B.....	Wausau
Wright J S m and d.....	Antrim	Dolson Chapin & Co m and d.....	Wausau
Battershall L A m and d.....	Arcade	DeWitt Jas N m and d.....	Wausau
Jackman J F m and d.....	Armada	Eddy Avery & Co m and d.....	Wausau
Miller Caleb & Sons m and d.....		Folsom & Arnold m and d.....	Wausau
Battershall L A m and d (Arcade).....	Attica	Gardner F F & Son.....	Wausau
Darwood & Daley m and d.....		Gates & Fay m and d.....	Wausau
Jenness J N & Co m and d.....		Haiser F & A.....	Wausau
Williams W m and d.....		Hay Butman & Co m and d.....	Wausau
Bracy & Clark p m.....	Augusta	Hitchcock & Ingraham m and d.....	Wausau
Davis Wilson m and d.....	Aurelius	Miller Albert m and d.....	Wausau
Davis B G & Co m and d.....		McEwen John m and d.....	Wausau

McGraw John & Co m and d (Portsmouth). Bay City	Jerome T & Co m and d.....Carrollton
McRoberts & Savage square timber.....	Litchfield E C m and d.....(New York City)
McLean Seth & Son m and d.....	Merrill C & Co m and d (Detroit).....
Moore Smith & Co m and d.....	Saylor T & Co m and d.....
Patrick M s.....	Shaw & Williams m and d.....
Peters W m and d.....	Tilden & Sackett m and d.....
Pitts & Crange m and d.....	Congdon & Colton m and d.....Carson City
Ramsdell James.....	LaDue & Young m and d.....
Richards Miller & Co m and d.....	Crawford Frank m and d.....Caseville
Rouse J M m and d.....	Barber W L.....Cedar Springs
Rust A & Co m and d.....	Beckhart Jacob p m.....
Rust Hay & Co.....	Benedict J O & E R s m.....
Sage H W & Co m and d (New York city).....	Graham C & Co m and d.....
Sanford J S p m.....	Grosvenor E m and d.....
Shearer James & Co m and d.....	Moon Chas B m and d.....
Stevens & Shailer m and d.....	Hubbard & Wood m and d (Chicago).....
Smith & Westover.....	Esterly Geo W & Co m and d.....Charlevoix
Smith & Wheeler p m.....	Charlotte Manufacturing Co staves.....Charlotte
Talbert James.....	Curtis Honck & Bennett p m.....
Taylor Moulthrop & Co.....	Hart & Richardson p m.....Charlotte
VanEtten Kaiser & Co.....	Johnson N A p m.....
Webster S H & Bro m and d.....	Loring Allen T.....
Westover Culver & Co.....	Merritt & Co p m.....
Whilthauer Schuerman & Co.....	Smith J W H & Co m and d.....
Whipple Parmely & Co m and d.....	Hurd & Smith m and d.....Cheboygan
Watrous Bros & Co m and d.....	McArthur Smith & Co m and d.....
Watrous M & Sons m and d.....	Mattoon S A m and d.....
Hopkins Bros & Wise m and d.....Bear Lake	Nelson Strahn & Co m and d.....
Anderson D H & Co m and d.....Bear Lake Mills	Prentice Geo H m and d (Detroit).....
Wilson Lather & Wilson m and d.....Belding P O	Smith David m and d.....
Davey W & Co d.....Bellevue	Smith Thompson m and d.....
Hull Bros p m.....	Smith E & F s m.....
Smith A A & Co m and d.....Bell River	Vorce Barker & Co m and d.....
Remick E & Co m and d.....Benona	Weller J B & Co m and d.....
Williams H m and d.....Benton Harbor	Goodale J C m and d.....Chesaning
Cave L W m and d.....Benzenia	Nason R H & Co m and d.....
Fitch & Phelps m and d.....Big Rapids	Garton & Davenport m and d.....Chester
Green L H m and d.....	Cobb J W m and d.....Clam Lake
Ives S m and d.....	Coombs & Bro m and d.....
Monroe Bros & Rose s m.....	Harris & Bro m and d.....
Stimson L D m and d.....	McKinon D C.....
Stinson & Clark m and d.....	Mitchell Geo A m and d.....
Wood H B sash doors etc.....	Shackleton & Green m and d.....
Ballard & Co m and d.....Birch's Mills	Starrett Henry d and p m.....Clinton
Stanton Leroy s m.....	Linderman & Ricker m and d.....Clintonville
Weller John m and d.....	Curry Jos L.....Clio
Whitney M S m and d.....	White John.....Clyde Mills P O
Brown John m and d.....Bird	Maxwell H N & Co m and d.....
Hipp & Hays m and d.....	Vincent Edward m and d.....
Smith W H m and d.....Birmingham	Atkins Gilbert & Co p m.....Coldwater
Ferry & Sons m and d (Grand Haven). Black Lake	McLane & Frith d.....
Jipson H m and d.....Blissfield	Sweet G C m and d.....Columbia
Wiley, Lane & Co staves.....	Hemingway H L & J L m and d.....Columbiaville
Anable T C m and d.....Bloomingdale	East Thos m and d.....Columbus
Conger & Broadwell m and d.....	Hungertford R H d.....Concord
Holmes L K m and d.....	Boubricht & French m and d.....Constantine
Kilbreffer & Ames m and d.....	George & Tweedall sash doors etc.....
Jenson L & Co s m.....Blue Lake	Harwood H J & Co m and d.....
Schmitz Anthony m and d.....Blunfield	Jones Wolf & Co m and d.....
Bond Bros m and d.....Bonds Mills	Hart J P m and d.....Coral
Bowen E H & Son m and d.....Bowen's Mill	Wagley John.....Cross Village
Headley Silas m and d.....	Backart Geo m and d.....Croton
Richardson J H m and d.....	Collins David m and d.....
Brown Sarah D m and d.....Breedsville	Higbee Nelson m and d.....
Parley Putnam & Son m and d. Bridgenan Laketon P	Rice Wm m and d.....
Weed B staves.....	Oneida Lumber Co m and d.....Crow Island
Brucker F & Co shingles.....Bridgeport Center	Fuller & Smith m and d.....Crystal P O
Hill L L m and d.....	Coffin & Cuddeback m and d.....Dallas
Hodgeman L m and d.....	Needham & Wilson m and d.....Dayton
Ketchum Bros shingles.....	Wilson Jas H m and d.....
Phelps & Wyman m and d.....Bridgeville	Wallace John B m and d.....Dearborn
Holmes J m and d.....Bronson	Ball & Ackley m and d.....Decatur
Richards & Fox m and d.....Buchanan	Rawson L T p m.....
Roe Charles m and d.....	Roger A H & Co m and d.....
Sherwood Alonzo m and d.....	Warner J P m and d.....
Pierce L m and d.....Burlington	Blinn & Row staves.....Deerfield
Herrington & Bros m and d.....Burnips Corners	Lovett & Smith p m.....
Baker O R p m.....Camden	Packard & Son m and d.....
McKinley James p m.....	Adams & Ferguson m and d.....Detroit
Welker H R m and d.....Campbell	Allen E G d.....
Downey Bros m and d.....Capax	Avery & Murphy m and d.....
Tibbals Botsford & Co staves.....	Backus & Bro m and d.....
Ballantine H A & Co m and d.....Carrollton	Bears J H d.....
Carrollton Lumber Co m and d.....	Bewick, Comstock & Co m and d.....
Gould Erastus T m and d.....	

Bigelow A E d.....	Detroit	Allison J P m and d.....	East Saginaw
Brooks C F m and d.....		Atwood W Q m and d.....	
Campbell E P d.....		Ballantine H A & Co m and d.....	
Carrier August d.....		Bissell A G & Co m and d.....	
Carrier Byron d.....		Burt W R & Co m and d.....	
Chisholm Jas d.....		Bundy & Youmans m and d.....	
Crapo W W m and d.....		Burnham & Still m and d.....	
Damon J B T & Co m and d.....		Cummings L E & Co m and d.....	
Detroit Lumber & Wooden Ware Works.....		Duncan & Gamble m and d.....	
Dewey J & Son sash doors etc.....		Dutton O S staves.....	
Dingeman & Rabaut sash doors etc.....		Estabrook & Mason m and d.....	
Dubois Lewis p m.....		East Saginaw Manufacturing Co.....	
Dwight Wm M & Co m and d.....		Eaton, Potter & Co m and d.....	
Faulconer R C d.....		Eddy C K m and d.....	
Ferguson A & Co d.....		Eddy, Avery & Co m and d.....	
Fletcher Geo M m and d.....		Edwards & Sanborn m and d.....	
Flynn John sash doors etc.....		Elsworth Arthur L.....	
Foster Joseph E d.....		Finnal Wm.....	
Gamble P M d.....		Gamble John m and d.....	
Green Geo B & Co d.....		Gardner F F & Sons.....	
Hebard Chas d.....		Gebhart & Estabrook m and d.....	
Hubbard & King d.....		Glynn P & Co m and d.....	
Huebner E sash doors etc.....		Goddard E G m and d.....	
Huff & Vandermullen d.....		Grant C W & Co m and d.....	
Ingersoll J W p m.....		Grant & Saylor m and d.....	
Ives, Green & Co m and d.....		Hill Jas H.....	
Japes John sash doors etc.....		Hunter Bros.....	
Jessup & McCune d.....		Hoyt Jesse m and d (N Y City).....	
Kershner & Rea d.....		Johnson T B s m.....	
Klien Martin d.....		Jones Chester B m and d.....	
Linsey & Co m.....		Lee Charles m and d.....	
Loud Gay & Co m and d.....		Mc Cormick A W.....	
Lyon Isaac L d.....		Mc Dougall R B.....	
Nason Chas E d.....		Lathrop, Insko & Co m and d.....	
Merrill & Palmer m and d.....		Marks & Flitz.....	
Moffat Hugh m and d.....		Merrill Chas & Co m and d.....	
Moore Chas F d.....		Mitchell & Roland Lumber Co m and d (Cincinnati).....	
Moore Frank d.....		Oneida Lumber Co m and d.....	
Moore F & S d.....		Ortman Chas L m and d.....	
Moore & Alger m and d.....		Owens & Brewer m and d.....	
Oakes Wm d.....		Rose D F & Co m and d.....	
Osborne C F & Co d.....		Rust J F & Co m and d.....	
Perley J H d.....		Saylor T & Co m and d.....	
Pitts & Cranage m and d (Bay City).....		Sears & Holland m and d.....	
Prentice Geo H m and d.....		Ten Eyck C E s m.....	
Ramm & Co sash doors etc.....		Terry Seeley & Spencer m and d.....	
Rea W J d.....		Tolfree & Simpson m and d.....	
Remick R C d.....		Turner H m and d.....	
Ross Geo d.....		Tuttle & Pease m and d.....	
Ross Daniel A & Co m and d.....		Thompson, Camp & Potter m and d.....	
Ross Geo A & Co d.....		Warner & Eastman m and d.....	
Ross A & Co d.....		Wiggins G B & B J m and d.....	
Schneider Stephen sash doors etc.....		Wright & Co m and d.....	
Skilings & Whitney Bros m and d.....		Yawkey, Wideman & Co m and d.....	
Standish J R pine lands.....		Adams, Jolley & Co m and d.....	East Tawas
Steele A M d.....		Bliss & Pierce m and d.....	
Tegeier Chas sash doors etc.....		Grant W G & Son m and d (N Y city).....	
Turner Robert sash doors etc.....		Smith H P & Sons m and d.....	
Warriner W d.....		Staats & Quackenbosh p m and sash etc.....	
Weber J F & Co d and sash doors etc.....		Garton & Davenport m and d.....	Eaton Rapids
Whittemore & Prentice m and d.....		Perrine D W & S C m and.....	
Wight H A & S G m and d.....		Stevens C W staves.....	
Williams, Osborne & Co m and d and p m.....		Hipp B W.....	Eau Claire
Wood W H & Co sash doors etc.....		Anderson J H m and d.....	Edgerton
Homes Geo m and d.....	De Witt	Becker G m and d.....	
Copeland R P.....	Dexter	Bradfield E m and d (Ada).....	
Pratt Geo.....		Cain James m and d.....	
Gray Thos m and d.....	Douglas	Cook & Scarvel s m.....	
Judd W sash doors etc.....	Dowagiac	House Oscar m and d.....	
Sill Benj. D & Son m and d.....		Kidder M C m and d.....	
Starrett C p m.....		Monroe & Jones m and d.....	
Darwood & Dally m and d.....	Dryden	Porter D m and d (Rockford).....	
Mears C m and d (Chicago).....	Duck Lake	Porter Seth s m.....	
Hall, Ward & Brewer m and d staves.....	Dundee	Trux Jas H s m.....	
Hunt, Wheeler & Co sash doors etc.....		Dexter & Noble m and d (Chicago).....	Elk Rapids
Morse Nathan m and d.....		Blair E W p m.....	
Stowell J A m and d.....		Leach & Ramsey m and d.....	Elsie
Kellogg & Sawyer m and d.....	Dunningsville	Mc Quinton Robt m and d.....	
McCrumb Geo W m and d.....	Eagle	Moore J B m and d.....	
Mitchell & Mahan m and d.....	East Bay	Butler & Gallagher m and d.....	Emmett Station
Bushnell John m and d.....	East Leroy	Herman & Son m and d.....	Erie
Quick, Fish & Andrews m and d.....		Whittington W & D E m and d.....	
Eastman Glen m and d (Grand Haven).....	Eastmanville	Glaser Emil p m.....	Escanaba
Hefner Thos m and d.....		Ames Bros m and d.....	Esserville
Thayer Edwin m and d.....			

Carrier John & Co m and d (Bay city).....	Essexville	Farrin & Co.....	Grand Rapids
Ferris & Hull m and d.....	Estella—Sumner P O	Knight Geo L & Co m and d.....	
Hicks James m and d.....		Krum Foster & Co p m.....	
Tucker, Morris W & Co.....		Long A B & Sons m and d.....	
Kaufeld & Andrews m and d.....	Eureka	Lore R W staves.....	
Davis & Curtis m and d.....	Evart	McElmer J G m and d (Lockwood)....	
Farewell Jas G m and d.....		Mackey Walker & Co lath mill (Chicago)	
Hamilton & Mason s m.....		Nichols & Co p m.....	
Lamb & Matthews m and d.....		Norton A F & Co.....	
Palmer, Welch & Russ m and d and staves...Exeter		Pardee Cook & Bro m and d.....	
Scofield S A m and d.....		Pew G H p m.....	
Travor staves.....		Powers W H p m.....	
Bloomer E J m and d.....	Fairfield	Powers W T & Son.....	
Calvin John m and d.....		Putnam Enos.....	
Fuller & Sager p m.....		Quimby J L.....	
Odell S & J m and d.....		Roberts A & Son.....	
Myer Henry shingles.....	Fair Haven	Robinson S & Co p m.....	
Schnoor H C m and d and staves.....		Ryan Young & Co m and d.....	
Farwell & Sawyer m and d.....	Fair View	Ward E F & Co.....	
Parkins & Sons m and d.....		Webster A & Co p m.....	
Batcheller, Slight & Co m and d.....		Wheeler Reuben sash doors etc.....	Grand Rapids
(Chicago).....	Ferrysburg	Wilkins & Bachman p m.....	
Slatt & Co m and d.....		Withey L H & Co m and d.....	
White, Glover & Co m and d.....		Wonderly Lumber Co m and d.....	
Balley C C m and d.....	Fife Lake	Dewory E m and d.....	Grandville
Gilbert Ira W m and d.....		Jennison H.....	
Walter W L s m.....	Flat Rock	Belknap & Oliver sash doors etc.....	Greenville
Atwood J B & Co m and d.....	Flint	Clark & Rhinesmith Lumbering Co.....	
Beardsley, Gillis & Co sash doors etc.....		Fuller & Gowan m and d.....	
Bezole, Fox & Co m and d.....		Hart Henry m and d.....	
Briscoe & Lockwood.....		Hutchings S G.....	
Busenbark & Stone.....		Jenks C U s m.....	
Carpenter Samuel m and d.....		Wright Bros.....	
Crapo W W m and d.....		Pardee Cook & Blanchard m and d (A Par-	
Decker r Grant staves.....		dee & Co New York).....	Hamlin
Eddy Chas C & Co m and d.....		McRoberts A m and d (Bay City).....	Hampton
Eddy Jerome p m.....		Backus A J m and d (Backus & Bro Det-	
Gibbs D & Co.....		roit).....	Harrisville
Hamilton Wm m and d.....		Westons Colwell & Co m and d.....	
Hascall H C m and d.....		Hills W m and d.....	Hart
Lee & Wilcox.....		Allen & Crook m and d.....	Hartford
Mc Creery W B p m.....		Hinckley Bros staves.....	
Mc Farland A m and d.....		Olds & Crandal sash doors etc.....	
Smith Hiram m and d.....		Walker s m.....	
Davenport Geo & Co m and d.....	Florence	Bentley J W & C G sash doors etc.....	Hastings
Grant & Saylor m and d (East Saginaw)....		Hortin & Jacobs m and d.....	Hazleton
Haskins, Martin & Wheeler m and d (East		Kellogg & Sawyer m and d.....	Heath
Saginaw).....		Starker D F s m.....	Hemlock
Merrill Chas & Co m and d (East Saginaw)		Blodgett D A m and d.....	Hersey
Shaw & Williams m and d.....		Gerrish Murphy & Co m and d.....	
Ford River Lumber Co m and d (Chicago).....	Ford River	Sutton & Fisher d.....	Hillsdale
Smith & Kelley m and d (Au Sable).....	Forester	Ferris R B m and d.....	Holland
Dwyer Geo G s m.....	Frankfort	Vanderveer E & Co staves and shingle mill.	
Hubbell & Wakefield p m.....		Buzzell Bros sash doors etc.....	Holly
Hileman & Hessen m and d.....	Freeport	Bavid Robt A m and d.....	Hopkins
Fruitport Mfg Co m and d.....	Fruitport	Hillard L m and d.....	
Gage Joseph m and d.....	Gagetown	Chubb J F s m.....	Howard City
Lloyd & McNair m and d.....	Gaines Station	Lord & Kipp s m.....	
Sayers Bros m and d.....		Morgan & Quick m and d.....	
Blakeslee Geo A m and d.....	Gallen	Mason & Reed.....	
Batchelor Slatt & Co m and d.....	Grand Haven	Barnard J E & Co.....	Howell
Bigelow & Stone.....		Blood E & Co.....	
Cutler D m and d.....		Wright J W sash doors etc.....	
Dirk & Barker m and d.....		R B Hubbard & Co m and d.....	Huron City
Eastman Galen m and d.....		Bates Gould & Gorham s m.....	Ionia
Ferry & Bro m and d.....		Colby E & Co m and d.....	
Gibson James.....		Stanton & Son m and d.....	
Monroe & Howlett m and d.....		Webber Bros m and d.....	
Reynolds & Emlay.....		Bennett & Woods.....	Jackson
Stydsorf & Busch m and d.....		Brooks C F d (Detroit).....	
Roscoe C L.....		Baxter & Selfridge p m.....	Jonesville
Wyman Buswell & Co.....		Bixby Bros & Flagg d.....	Kalamazoo
Ca le H E m and d.....	Girard	Dewing & Son m and d.....	
Bradley H Rose p m.....	Grand Ledge	Kellogg J E & Haltenhaus m and d.....	
Lamson Edmund m and d.....		Sweetland & Co.....	
Russell E s m.....		Tyler & Turner p m.....	
Barnhart & Osterhaut m and d.....		O S Abbott & Co m and d.....	Kalkaska
Borden A D & Co p m.....		Ballou Gustin & Co m and d.....	Kawkawlin
Clancey John.....		Wade & Pettys m and d.....	Lake Port
Clark G B & Co sash doors etc.....		Ciley Bros & Co sash doors etc.....	Lamont
Com-tock C C m and d.....		Bellows W D & Bro m and d.....	Langston
Crossette Graves & Co m and d.....		Briggs N H.....	
Cutcheon L M.....		Biggs Z E.....	
Cutler Robt.....		Crawford & Co m and d.....	
DeGraaf Vrieling & Co sash doors etc.....		Norton J D.....	

Sprague R F	Langston	Sias John m and d	Midland
Wilcox & Briggs m and d		Carman & Tone m and d	Millbrook
Allen & Wise sash doors etc	Lansing	Howd Walter S m and d	
Clark & Harris m and d		Randall W & Bro m and d	Millburg
Longstreet & Lapham p m		Beck C F	Monroe
Ottis & Son d		Eisenman F A sash doors etc	
Scofield S G m and d		Noble W A	
Walker Gilman & Co sash doors etc		Root & Stevens sash doors etc	
Hughes & Bro m and d	Lapeer	Scranton J P	
Dodge C T m and d		Shaub Phillip	
Hemingway C M & Co p m		Terry M G	
Johnston Alex m and d		Dowling H P & Co p m	Montague
King Robt m and d		Ferry Dowling & Co m and d	
Millis J D & Son		White F H & Co m and d	
Peters F J s m		Weston Bros m and d	
Stevens Currier & Townsend m and d		Moore & Ferguson m and d	Monterey
Walker Bros m and d		Cook Pendleton & Jones s m	Morley
Powell Hauck & Bro m and d	Lawton	Cummer J & Son m and d	
Fray H P staves	Lealie	Gerrish E W	
Grout V H p m		Hugh W p m	
Russell S O		Fowle Benj m and	Moscow
Moss Mills & Galge m and d	Lexington	Crittenden Chas d	Mt. Clemens
Nims Tewksbury & Co m and d		Hall & Shook m and d	
Woods J L m and d		Snook Bush & Mosier m and d	
French Wyman & Co m and d	Lockwood	Snook T W staves	
King Quick & Co m and d	Lowell	Tucker E J m and d	
Mason & Ecker p m		Hughes Bros m and d	Mt. Morris
Wooding & Hine m and d		Look Asher p m	
Donaher & Melendy m and d	Ludington	Weeks Huntoon & Co m and d	
Foster & Stanchfield m and d		Fancher & Brazee m and d	Mt. Pleasant
Pere Marquette Lumber Co m and d		Abbey French & Co m and d	Muir
Roby Geo W & Co m and d		Begole J & Co m and d	
Ward E B m and d (Detroit)		Hayes Bros	
Niblack & Sage m and d	Macon	Hewitt W P s m	
Spafford & Conklin m and d	Manchester	Rumsey O J r	
Butters Horace m and d	Manistee	Wazer & Fox m and d	
Canfield & Wheeler m and d		Wager & Whitman m and d	
Cushman Calkins & Jo m and d (Chicago)		Williett A M & J W p m	
Jennett & Dunham m and d		Allen A M m and d	Muskegon
Engleman Sailing & Babcock m and d (Milwaukee)		Beidler Mfg Co m and d	
Filet & Sons m and d (Milwaukee)		Bigelow W H & Co m and d	
Giffith Ruddock & Co m and d		Blodgett & Byrne m and d	
Hopkins Bros & wise m and d		Browne Nelson & Co m and d	
Leitch Neil m and d		Chapin & Foss m and d (Chicago)	
Magill & Canfield m and d		Davis Chauncey & Co m and d	
Diller M F m and d		Easton Robt sp	
Pauget & Thorsen m and d (Stronach Lumber Co)		Gluc W & Co m and d	
Peters R G & Co m and d		Hall S C	
Reitz Bros m and d		Kelley Wood & Co m and d (Chicago)	
Sands Louis m and d		Mann A V & Co m and d	
Sibben S p m		Mason Lumber Co m and d	
Tabor & Huennekens m and d		Merrill J D & E W s m	
Tyson Sweet & Co m and d		Merrill & Palmer m and d (Detroit)	
Seaman Warren m and d	Mantou	Montague C S & Co p m	
Jones R m and d	Maple Rapids	Morrison & Flemming m and d	
Gallinger Adams m and d	Marathon	Newaygo Co m and d	
Cobb J & Co staves	Marcellus	Outhwait G T	
Hunt A S m and d		Roberts & Hull m and d (Chicago)	
Baird W m and d	Marine City	Rutherford W & Co m and d (Chicago)	
McElroy C m and d		Ryerson Hills & Co m and d (Chicago)	
Decker Chas m and d	Marion	Sandford S R	
Stevenson W M m and d		Storrs & McDougal m and d	
Alexander M J m and d	Marshall	Torrent Esau m and d	
Church Nelson m and d		Torrent John m and d	
Bunce H E m and d	Marysville	Torrent & Arms m and d	
Mills N & B m and d		Truesdell Gleason m and d	
Sanborn W and d		White Smith & Swan m and d (Chicago)	
Darrow & Walker m and d	Mason	Wilcox T B & Co m and d (Chicago)	
Huntington J L & C D m and d		Wilson & Boyce m and d	
Willett J m and d		Kirtland & Son staves	Nashville
Peacock R m and d	Masonville	Olds A W & Co m and d	
Brown & Lacy m and d and sash doors etc	Matherton	Baker W m and d	New Baltimore
Lance & Jones sash doors etc		Francisco & Bro staves	Newport
Mather Asaph & Vernon m and d		Johnson W S d	Niles
Dysinger D m and d	Memphis	Tuttle Jos S d	
Mansfield J & Co m and d		Menardi A E m and d	Nortonville
Bagley & Copps p m	Menomonee	Bentley W m and d	North Branch
Falson A p m		Moyer A m and d	
Stephenson Robt & m and d		Lawrence Sidney m and d	Nunica
Wright & Tweedle p m		Converse & Wickham staves	Oakley
Larkin John m and d	Midland	Peck & Sackridge m and d	
Lindsay & Gamble m and d (Detroit)		Baser J m and d	Ogden Center
		Hodges J S m and d	
		Klug T m and d	

Hall-Hiram m and d.....	Orleans	Curtis L B.....	Saginaw City
Smith Kelly & Dwight m and d.....	Oscoda	Gould E F.....	
Richardson Avery & Co m and d (Alpena). Osasneke		Green & Harding.....	
Robinson Cunningham Haines & Co m & d		Hardin & Babcock p m.....	
Ballou & Co sash doors etc.....	Otsego	Heather & Allison m and d.....	
Leighton S m and d.....		Jerome T & Co.....	
Benson C B m and d.....	Otter Lake	Ketchum D B s m.....	
Frisbie A H m and d.....	Ovid	Nester Bros.....	
Sowers Geo D & Co m and d.....		Newton & Smith.....	
Robinson & Miller p m.....	Owosso	Payne A B & Co m and d.....	
Woodward L E.....		Potts & Prieur.....	
Freeman G W & Co m and d.....	Palmyra	Rust Amasa.....	
Bathwick & Stevens m and d.....	Pavilion	Rust Eaton & Co.....	
Sager John m and d.....		Rust & Hay.....	
Everett J C sash doors etc.....	Paw Paw	Sturtevant, Green & Co m and d.....	
Freeman & Stinson m and d.....		Swift & Lockwood m and d.....	
Brown S A & Co m and d.....	Pentwater	Williams Geo F & Co m and d.....	
Nickerson & Calester m and d.....		Wright, Tipton & Co m and d and p m	
Sands & Maxwell s m.....		Wright & Wetherell m and d.....	
Stringer Frank m and d.....	Perrinsville	Willie Bros s m.....	
Huckley John m and d.....	Perry	Bentley H J m and d.....	St Charles
Woodworth W H m and d.....	Pewamo	Campbell D J.....	
Cone & Cutter m and d.....	Pierson	Freeman & Co.....	
McConnell W & Sons m and d.....	Pierson	Green D W.....	St. Charles
Pangham & Borden m and d.....		Kimberley C S.....	
Quincy & Bromley s m.....		Guernsey Chas.....	St Claire
Stone & Seeley m and d.....		Jenks E W.....	
Taylor & McMullen m and d (Wood Lake)..		Few T & F.....	St Joseph
Walter & Bro m and d.....		Holcomb & Evans m and d.....	
Wensel & Bro s m.....		Brooks & Adams m and d (Detroit).....	Salzburg
Keeler S S & Co m and d.....	Pigeon Creek	Laderach Bros m and d.....	
Adams F E & Co m and d.....	Pine Grove Mills	Malone & Gardiner m and d.....	
Clements S N m and d.....		Root Bros s m.....	
Everest & Wise m and d.....		Smith C M & Co m and d.....	
Paris P G m and d.....	Pine Plains	Thompson W m m and d.....	Sand Creek
Paris S A m and d.....		Avery O W m and d.....	Sand Lake
Lantz John m and d.....	Pine River	Baird & Farnum s m.....	
Wood & Maxon m and d.....	Pittsford	Beaver, Miller & Co m and d (Et Wayne	
Richardson J C m and d.....	Plainfield Kent Co	Ind.).....	
Topping M & Sons m and d		Carr J M m and d (Union City Ind.).....	
and staves.....	Plainsfield Livingston Co	Dickinson Jerome m and d.....	
Bennett C H.....	Plymouth	Hafley P s m.....	
Ward David m and d.....	Pontiac	Hart M & S m and d.....	
Ayers Learned & Co m and d.....	Port Austin	Hellner Geo W s m.....	
Haskells & Spaulding m and d.....	Port Crescent	Pangborn & Borden s m.....	
Wood J L & Co m and d.....		Roberts & Driggs m and d (Grand Rapids)	
Avery & Murphy m and d.....	Port Huron	Stone & Seeley m and d.....	
Batchelor J F & Son m and d.....		Twichell C R.....	
Bunce Z W & Son m and d.....		Ware E & Co.....	
Fish A & H m and d.....		Wilkins W L m and d.....	Saraana
Harrington D B m and d.....		Mercer & Slater m and d.....	
Haynes J m and d.....		Moffat A J m and d.....	Saugatuck
Hibbard W B & Co m and d.....		Moore H D m and d.....	
Howard & Son m and d.....		The Saugatuck Lumber Co m and d.....	
Jenkinson W staves.....		Abbott Chas m and d.....	Scio Township
Johnston John & Co m and d.....		Bathwick & Stephens m and d.....	Scott
Sanborn & Co m and d.....		Collingham J m and d.....	Sebewa
Skinner T S m and d.....		Friend J m and d.....	
Skinner & Ames m and d.....		Ambruster & Weimer m and d.....	Sebewaing
Wells F L.....		Dunn J & Sons m and d.....	Seville
Bergen P P staves.....	Portland	Blanchard J C & Co m and d.....	Sheridan
Bowser, Griffin & Co sash doors etc.....		Fargo D F & Co m and d.....	
Dilley J staves.....		Stearns J D m and d.....	Smyrna
Erskine E J m and d.....	Port Sanilac	Beckwith & Co.....	South Bay City
Thompson T & J S m and d.....		Braddock A C & Co p m.....	
Prentiss Geo H m and d (Detroit).....	Prentiss Bay	Dunham & Whipple.....	
Quimby J L m and d.....	Quimby	Miller A & Co m and d.....	
Alden, Sutton & Co staves.....	Quincy	Stevens A & Co m and d.....	
Hawley Martin.....		Watrous Bros & Co s m.....	
Wilbur R W m and d.....		Watrous M & Son m and d.....	
Exelby Jesse m and d.....	Ridgeway	Byer G W & Co m and d.....	South Haven
Fritz F m and d.....	Riga	Wilson S P m and d.....	
Pack, Jenks & Co m and d.....	Rock Falls	Ann Arbor Lumber Co m and d.....	South Saginaw
French Geo m and d.....	Rockford	Briggs & Co s m.....	
Porter Dennis m and d.....		Bundy & Martindale s m.....	
Molitor A & Co m and d.....	Rogers City	Bundy & Yeoman m and d.....	
Ayer A B m and d.....	Romeo	Curtis & Eastbrook m and d.....	
Andre Alex.....	Saginaw City	Boice & Kearny m and d.....	Spring Lake
Arnold & Fulsom (Albany N Y).....		Cutler & Savidge m and d.....	
Barnard & Binder m and d.....		Marada & Maxwell m and d.....	
Blanchard C N m and d.....		Monroe Boyce & Co m and d.....	
Burnham, Still & Co.....		Sisson & Seymour m and d.....	
Butman Myron.....		Cross, Wright & Co m and d.....	Standish
Butman & Rust.....		Bennett J E m and d.....	Stanton
Chapin A B & Bro.....		Bock W m m and d.....	

Burham & Wales s m.....	Stanton	Heartt Wm A m and d.....	Wahjameja
Case G F s m.....		Goodrich Enos m and d.....	Watertown
Gardner D M s m.....		Sutherland J m and d.....	Watervleit
Gilbert A m and d.....		Curtis & Walker m and d.....	Wayne
Stevens W H m and d.....		Arnold & Catlin p m.....	Wenona
Turner Bros & Co s m.....		Litchfield E C m and d (New York City)....	
Withey & Patchin s m.....		Sage H W & Co m and d (New York City)....	
Wood & Buckaloo m and d.....		Hetfield & Fluter m and d.....	Wheeler
Francisco & Marcy m and d.....	Stanwood	Peck & Beckenridge m and d.....	
Stephens, Mellen & Tackles m and d.....	Stephens P O	Dawson Geo m and d.....	Sault de St. Maria P O
Stromach Lumber Co m and d.....	Stronah	Norris & Perry m and d.....	
Johnson, Packard & Austin m and d.....	Sturgis	Seymour Henry W m and d.....	
Wallace Z H & J S sash doors etc.....		Alley J & Co m and d.....	Whitehall
Harris Myren m and d.....	Talmadge	Bowen A B & Co m and d.....	
Cameron J C & Co m and d.....	Tawas City	Cone & Green m and d.....	
Laidlaw James m and d.....		Cook John P & Son m and d.....	
Schram E L s m.....		Cook Leitch & Co m and d.....	
Aldrich J A m and d.....	Tekons'ha	Dalton & Bro m and d.....	
Mc Cann Thos m and d.....	Three Lake	Farnum H T m and d.....	
Brownell & Dexter m and d.....	Three River:	Franklin G W m and d.....	
Crossett & Pugh m and d.....		Heald Avery & Co m and d.....	
Jackson Geo A & Co m and d.....		Hedges & Green m and d.....	
Wilcox, Arnold & Co m and d.....	Three River:	Johnson & Hageman s m.....	
Stone & Shirts m and d.....	Trent Pt:	Staples & Covell m and d.....	
Whitney Bros m and d.....		Weston Bros m and d.....	
Barton D m and d.....	Tryon	Luscomb & Pierce m and d (Milwaukee). White River	
Patterson Jas m and d.....		Campbell & Co m and d.....	White Rock
Stone A T m and d.....		Haviland J B & Co m and d.....	Whitewater
Tucker John B m and d.....	Union City	Schofield & Rickerd m and d.....	
North T & J E m and d.....	Vasat	Wixom & Sibley m and d.....	Wixom
Martin H R m and d.....	Vermontville	White B m and d.....	Woodbridge
Squier M L m and d.....		Taylor & McMullen m and d.....	Wood Lake
Perry E m and d.....	Vernon Isabella Co	Shafter David G m and d.....	Worth P O
Bell & Starkey m and d.....	Vernon Shiawassa Co	Fullmore & Scovill m and d.....	Ypsilant
Brand J C staves.....		Parsons Bros d.....	
Sayers Bros m and d.....		Burt W R & Co m and d.....	Zilwaukee
Martin, Mc Allister & Lawton m and d.....	Verona	Bliss A T & Bros m and d.....	
Puddock & Ballantine m and d.....		New York & Michigan Lumber Co.....	
		Rust Eaton & Co m and d.....	

CHICAGO.

Adams & Lord, d 368 Lumber street.....	Chicago	Fisher C C d 514 Lumber.....	Chicago
Allen & Bartlett d Laffin s of West 22d.....		Foster Thos d 15 W 22d.....	
Avery Murphy & Co d s w cor Fisk.....		Fisher John & Sons d Robert w end of Hu-	
Avery Thos M d Canal n w cor Fulton.....		ron.....	
Barton & Jones d Lumber cor 12th.....		Ford River Lumber Co m and d office 242 S	
Babcock W S d 400 Lumber.....		Water yard W Throop s of 22d.....	
Basse & Bruse d Elston av n e cor W Divis-		Fox & Howard d Ashland av cor Hickory..	
ion.....		Franz L & Son d 24th n e cor Butler.....	
Batcheller & Slaughter d Throop st cor 22d...		Garden City Mfg Co d 22d cor Morgan...	
Bateson Alex d 347 Archer av.....		Gardiner John D & Co m and d 520 Lumber..	
Beidler J & Bro d Loomis cor 22d.....		Gifford Ruddle & Co m and d room 7, 242	
Benton Geo C d Union s w cor 22d.....		S Water.....	
Bigelow Bros d Fisk n 22d.....		Goss & Phillips Mfg Co m and d Clark s w	
Bishop & Lull d Throop n 22d.....		cor 12th.....	
Boardman Packard & Co d 94 Lumber st.....		Goldie d Eighteenth s e cor Canal.....	
Bradley Shepard & Smith d 782 Clark st.....		Goodman J B & Co d Room 1 261 Randolph	
Burdick & Mead W 22d cor Blue Island av.....		Goodman W d 250 S Water.....	
Bush & Hill m and d 242 S Water st.....		Goodrich W H d 84 Market.....	
Bushnell, Walworth & Reed m and d 562		Gray A R & Co m and d 22d cor Throop....	
Lumber st.....		Graves D F d Throop n 22d.....	
Calkins & Fisher d 213 Archer av.....		Gundersen Senit T m and d 238 S Water....	
Chapin & Foss d 214 S Canal st.....		Grusendorf & Mueller d foot of Lessing....	
Charnley Bros & Co m and d 238 S Water st		Hannah Lay & Co d 76 and 78 Lumber....	
Chicago Lumber Co m and d 242 S Water st		Hannah Lyman & Co d 89 Main.....	
Crumb Bros d Division cor Elston av.....		Hartman & Graham d 238 S Water.....	
Chase & Pate d 511 Archer av.....		Harvey T W d Morgan cor 22d.....	
Clark Saml D d 70 LaSalle st.....		Hatch Holbrook & Co d 265 Archer av.....	
Combs Park & Co 22d st cor May.....		Hempstead & Beebe d 14 Chicago av.....	
Curtis & Skinner d 96 N Canal st.....		Higbee Chas E d 242 S Water.....	
Cutler Savage & Co m and d 236 S Water st		Hillard Churchill & Co d Cologne cor Joseph	
Davis & Mason m and d 236 S Water st.....		Hipple & Lestmann d 61 Hawthorne av....	
Davis & Murray d 481 Archer av.....		Holt Balcom & King m and d (Oconto Wis)	
Dean Bros d Fisk s of 22d.....		246 S Water.....	
Derickson & Sons d Laffin cor W 22d.....		Houghteling W D & Co m and d 250 S Wa-	
Dodge E J & Bro d 111 W 12th.....		ter.....	
Driscoll P F d Halsted.....		Holmes & Co d 83 Grove.....	
Egleston Hazelton & Co m and d 236 S Wa-		Holden H N d Market s e cor Jackson.....	
ter.....		Horn W H d 284 S Water.....	
Elder Fred d North Branch cor Division....		Hubbard & Wood d 236 S Water.....	
Eldred E & Co d Polk s e cor Beach.....		Hutt & Johnson d E Grove N 20th.....	
Elkins & Cook d 881 Lumber.....		Irish Buelien & Co d 234 S Water.....	
Essroger B Beach and Canal.....		Jones D H & Co m and d Room 16, 242 S	
Fauntleroy & Co d 22d s e cor Morgan....		Water.....	
Ferry & Bro m and d w end 18th st bridge		Jenkins & Murphy d 22d cor Laffin.....	

Johnson A B d 148 Kingsbury.....Chicago
 Kelley Wood & Co 22d s e cor Center av.....
 Ketchum Stephens & Co d 258 Sherman.....
 Learned S J d Center av s of 22d.....
 Long J Henry d 904 S Halsted.....
 Loomis & Davis d 894 Fifth av and Fisk...
 Loveland R A & Co d Lumber cor of 22d...
 Loveland & Spencer d 221 cor Lumber.....
 Lowell & Barker d foot of Fisk.....
 LUDINGTON WELLS & VAN SCHAICK m and d
 offices 244 S Water, yards Loomis N 22d and
 I C R.....
 McLaren d cor Franklin and S Water.....
 McDonald & Roe d Taylor s w cor Sher-
 man.....
 McMullen & Officer d Throop s w cor
 Lumber.....
 Martin S K d 488 Lumber.....
 Mears Bates & Co m and d 82 Beach.....
 Mears C & Co m and d 58 Kingsbury.....
 Mendon & Winter d Throop s of 22d.....
 Menominee River Lumber Co m and d office
 200 S Water.....
 Merrill & Skeele d 845 Lumber.....
 Mayer C J L d 25 W Ohio.....
 Minard Ira & Co d Loomis N 22d.....
 Munro Robbins & Co d W 12th cor Lumber..
 Nelson Bros d Grove n w cor 22d.....
 N Ludington Co m and d office 242 S Water
 Noble & Little d Canal n w cor Carroll av..
 Norris Lumber Co d 165 W 22d.....
 North Branch Lumber Co d 40 Front.....
 Palmer Fuller & Co d W 22d cor Union.....
 Park & Soper d 775 S Canal.....
 Pearson, J N d 60 Lumber.....
 Perry Pearson & Co d S end Sherman N
 12th.....
 Peshtigo Co m and d N Water N pier.....
 Phillips & Browne m and d Room 2 238 S
 Water.....
 Pillsbury Bradley & Co d Main n e cor Co-
 logne.....
 Pond & Soper d W 22d cor Loomis.....
 Porter & Co m and d Room 1, 261 Randolph
 Porter & Fuller d 140 Beach.....
 Queal Robt F & Co d Throop s of T22d....
 Richards Norris & Co d W 22d cor Luffin...
 Rietz Chas & Bro d 27 N Canal.....
 Roberts & Hull m and d 246 S Water.....
 Robinson Geo G & Co d Hawthorne av n of
 gas works.....
 Ryerson Martin & Co m and d Room 4 242
 South Water.....
 Ryan Young & Co m and d 236 S Water.....
 Sawyer S W d 133 LaSalle.....
 Schulenburg & Boeckler m and d Main
 cor Cologne.....
 Spalding Jesse m and d 250 S Water.....
 Sheriffs John & Son d Beach cor Taylor....

Shoemaker & Howell d Throop N 22d.....Chicago
 Soper Brainard & Co d Polk cor Beach.....
 South Branch Lumber Co d 22d cor Loomis
 Starrett & Bro d W 12th s w cor Lumber...
 Stephens & Clarke Archer av cor Quarry...
 Stevens Plowdon d 924 S Halsted.....
 Street & Chatfield d Rocket w end of Huron
 Terry & Bro d w end 13th st bridge.....
 The B L Anderson Co m and d Fisk cor 22d
 The Kirby Carpenter Co m and d Loomis nr
 22d.....
 Thompson H & Co d Quarry bet Archer av
 and the river.....
 Truesdell Gideon Room 6 242 S Water.....
 Turner E H & J S d 84 and 86 Lumber.....
 Waldo John d 120 N Canal.....
 Waldo Waters & Co d 7 N Canal.....
 Walkup & Neebes d 361 Lumber.....
 Washburn Edgar d 195 15th.....
 Weed A & Co W Chicago av.....
 Wilce Stephens & Co p m 22d and Throop
 White Swan & Co m and d 252 S Water...
 Whitbeck H Company m and d 257 W 22d
 head of Fisk.....
 Whitcomb R S d 714 W Washington.....
 Wheelock Sylvester d foot of Fisk.....
 White Geo E d 122 N Sangamon.....
 White Joseph d 126 N Union.....
 White Rowell & Co d 34 W Chicago av.....
 Wolf Kauf & Essroger d Sebor bet Canal and
 Beach.....
 Woodruff W N & J F d Grove foot of 19th..

COMMISSION.

Barker Cyrus A 252 S Water.....
 Bell Robt L Room 2, 252 S Water.....
 Bickford R K & Co 240 S Water.....
 Blanchard Borland & Co 242 S Water.....
 Brown W Room 5, 242 S Water.....
 Calkins W W Room 1, 238 S Water.....
 Carter Artemas 240 S Water.....
 Deming Chas & Co Room 3, 238 S Water.....
 Ewer & Aarhus 238 S Water.....
 Frazer Jas Room 16, 242 S Water.....
 Goodenow & Hinds 234 S Water.....
 Irish Bullen & Co 234 S Water.....
 Long John 238 S Water.....
 Loomis John & Co 2 Franklin.....
 Marsh & Goodrich 252 S Water.....
 Meglade W Room 2, 238 S Water.....
 Mueller W Room 5, 242 S Water.....
 Prettyman W B 236 S Water.....
 Rice Ed B Room 4, 252 S Water.....
 Ripley W 238 S Water.....
 Schulenburg Albert 234 S Water.....
 Simpson Ruddock & Co 238 S W.....
 Southworth W L 234 S Water.....
 Williams Thomas 238 S Water.....

IOVA.

Steerwalt W d.....Abbott
 Jarton & Co d.....Ackley
 Rath John d.....
 Faysner G W d.....Afton
 Barnesworth D (hardwood saw mill)...Agency City
 Parkinson B d.....Ainsworth
 Gilbert, Hedge & Co d (Burlington Ia).....Albia
 Patton U L d.....Albion
 Taylor & Bro d.....Alden
 Johnson W W d.....Algona
 Putnam F L d.....
 Wilson John & Co d.....
 Chambers Bros & Co m and d (Muscatine
 Ia).....Allerton
 Madigan M d.....Altona
 Lamb C & Son m and d (Clinton Ia).....Ames
 Jones & Bradley (hardwood mill).....
 Markham M A d.....
 Benton W S d.....Anamosa
 Blackburn John S (hardwood mill).....Arcola
 Bowers & Billmyer (hardwood mill).....Auburn
 Bryant & Sharp (hardwood mill).....Augusta
 Ainsworth & Waterman d.....Avoca
 Ledwick T d.....

Goodsill & Bro d.....Bedford
 McConville H & Co.....Belle Plaine
 Henry Jas P d.....
 Lamb & Son m and d (Clinton Ia).....
 Wilson J D d, agent.....Bellevue
 Brown M R m and d.....
 Strasser & Schleck p m and d.....Bertram
 Parker & Upton (hardwood mill).....
 Wise J K d.....Blairstown
 St John Jas d.....Bloomfield
 Eutler & Meek p m.....Bonapart
 Kerr, W B d (agent).....Boone
 Carr Chas W d.....
 Nowlin Bros d.....Brighton
 Lloyd & Stickney d.....
 Memer, John d.....Bristol
 Burdick A (hardwood mill).....
 Morris J W d.....Brook
 Conklin & Newcomb d.....Brooklyn
 Holmes T J & Son d.....
 Small W E & Son d.....
 Cass H d.....Buffalo
 Schuh L & Co m and d.....
 Cook W E & Co s m and m and d.....Burlington

Berry W S & Co m and d.....	Burlington	Allen & Boss d.....	Dexter
Carson & Rand m and d.....		Mark J G d.....	
E D Rand & Co m and d.....		Elerich James d.....	Dowd's Station
Dickie J & J m and d.....		Dow & Graves d.....	Dowville
Duncan & Hosford m and d.....		Lockman & Elliott d.....	Drakesville
Gilbert, Hedge & Co d.....		Pelan & Randall m and d.....	Dubuque
Joy E & Co.....		Robison J M m and d.....	
Millard Frank & Co d.....		Weston Burch & Co m and d.....	
Nairn, Gillis & Co p m.....		Carr Austin & Co sash doors etc.....	Dubuque
Parsons F T & Co d.....		Clarke & Scott m and d.....	
Winter D & Co p m.....		Dubuque Lumber C m and d.....	
Seeley & Shaw d (McGregor Ia).....	Calmra	Iowa Lumber Co m and d.....	
Anthony & McLoskey m and d.....	Camanche	Ingram Kennedy & Day m and d.....	
Grafton W H (hardwood mill).....	Cambridge	Knapp Stout & Co m and d.....	
Green J L d.....	Carroll	Langworthy S M d.....	
Hatch & Wingate d.....	Casey	Lumbert E R & Co d.....	
Whitmore E O & Co d.....		Lembeck H & Co sash doors etc.....	
Ford & Zeising d.....	Cedar Fall	Wheeler & Warner d.....	Dunlap
Lamb, Bing & Co d.....		Dyer Henry d.....	Dyalsville
Green & Rowley d.....	Cedar Rapids	Krapf A d.....	
Lamb C & Son m and d (Clinton Ia).....		Twogood C d.....	
Dyer d.....	Center Point	Brown Doty & Co d.....	Eagle Grove
Bottles & Co d.....	Centerville	Puckitt Daniel d.....	
Gilbert, Hedge & Co d (Burlington).....	Chariton	Getchell & Son d (Des Moines).....	Earlham
Andrews & Harrison, sash, doors, etc.....	Charles City	Harper Geo d.....	Earlville
Grimmes H, sash, doors, etc.....		McGavic E J & Bro d (Keokuk).....	Eddyville
Mitchell & Fletcher d.....		Sage E T & Co d.....	Eldon
Parker & Gennels p m.....		Hall & Conger d.....	Eldora
Smith, Stephen d.....	Chelsea	Diamond & Winden m and d.....	Elgin
Archer Jas d.....	Cherokee	Sutter Lewis & Co d.....	
Hixon & Fisher d.....		Froarque Daniel m and d.....	Elk River
Hobart & Snyder d.....		Tomblin D M d.....	Emerson
Hull J M & Son d.....	Chillicothe	Pond E G (hardwood mill).....	Emmitsburg
Osgood & Kimball d.....	Clarinda	Wilson J J & Co d.....	
Rucktaschel Geo d.....	Clayton	Hedges J S & Co d.....	Fairfax
Schumaker A & Co.....		Phipps J W d.....	
Woodford & Johnson d.....	Clear Lake	Doty N S d.....	Fairfield
Clinton Lumber Co m and d.....	Clinton	Rand E D & Co m and d (Burlington).....	
Curtis Bros & Co sash, doors etc.....		Whitmore Seth d.....	Farley
Joice & Smith sash, doors etc.....		Gabelman Fred d.....	Farmington
Lamb C & Son m and d.....		Lyman G F d.....	Fayette
Young W J & Co m and d.....		Duckworth Cook & Co m and d.....	Floris
Graves W H d.....	Colesburg	Blowers & Clark (hardwood mill).....	Forest City
White & Bedow.....		Shori N d.....	Ft. Atkinson
Baldwin & Maxwell d (Iowa Center).....	Colo	Brown H C d.....	Ft. Dodge
Hobbie & Bro d.....	Columbus Junction	Conway Owen d.....	
Hoyt & Burdick d.....	Conover	Keefe Plough & Co d.....	
Seely & Shaw McGregor Ia.....		Atlee Saml J & Co m and d.....	Fort Madison
Beymers A M & Co d.....		Gibbs E A d.....	
Johnson H L & Co.....	Corning	Kasten Chas D.....	
Walden Allen d.....	Corydon	Ingram & Felix d.....	
Green Thos & Son d.....	Council Bluffs	Miller N B & Co.....	
Hammer Lewis d.....		Wilson John d.....	
Hoagland Geo T & Co d (Hannibal Mo)		Bianfuss F d.....	Franklin Center
Young & Co d.....		Baelton A m and d.....	Fulton
Fleming W J d.....	Cresco	Frank J m and d.....	
Rand E D & Co m and d (Burlington Ia).....	Creston	Slipper John & Bro m and d.....	
Rand E D & Co m and d (Burlington Ia).....	Cromwell	Woodford & Wells d.....	Garnavil
Easton J S d.....	Dallas Center	Rinehart & Horton d.....	Gilman
Cable G W & H d.....	Davenport	Marsh & Lambert d.....	Glen Roy
Davis L S m and d.....		Tistleson O d.....	
Kirk F, sash, doors, etc.....		Mills & Atkins d.....	Glenwood
Lindsay, Phelps & Co m and d.....		Hankins & Ruggles d.....	Glidden
McClelland, T W sash, doors, etc.....		Park C B & Co d.....	Grand Junction
Price, Hornby & Kehoe m and d.....		Clark S H d.....	Grand Mound
Benwick Wm m and d.....		Janzen C d.....	
Roberts & Rohrbach, sash doors etc.....		Barnum, Case & Co d.....	Green
Schrreker & Mueller m and d.....		Craver & Steele d.....	Grinnel
Skinner W J d.....		Davis & Kelsey d.....	
Flemming W & J d (McGregor Ia).....	Decorah	Hobart Chas & Son d.....	
Atwood & Wolcott d.....	Delaware	Benson, P T d.....	Guthrie
Knowles J d.....		Floete Chas d.....	Guttenbergh
Chandler M d.....	Delmar	Goetz, Adam d.....	
Dupuis M d.....		Luck B H d.....	
Wheeler & Warner d.....	Dennison	Phelan & Zimmerman m and d.....	
Carver Young & Co d.....	Des Moines	Wikoff A H d.....	Hamburg
Collins & Shyrock d.....		Smith H J & A J d.....	Hampton
Getchell & Son d.....		Smith W P & Bro d.....	
Gilchrist J K & W H d.....		Lane & Hollister d.....	Honey Creek
Heath H R sash doors etc.....		Flusher A H hardwood mill.....	Horton
Sypher R W d.....		Eckhart Z d.....	Independence
Getchell & Son (Des Moines Ia).....	De Soto	Ingram, Kennedy & Day m and d (Dubuque Ia).....	
Buckley John d.....	De Witt	Kinyon S C d.....	
Butterfield Thos F & Co d.....		Newman S d.....	
Kettering & English p m.....			

Stout Z & Co d.....	Independence	Martin S & Co d.....	Mona
Winnegar & Manny d.....		Burdick E E d.....	Monticello
Zinn E d.....		Smith Thos P & Bro d.....	Montour
Chase & Hube d.....	Ionia	Ochiltree H M & Sons d.....	Morning Sun
Baldwin & Maxwell d.....	Iowa Center	Norwood D d.....	Moulton
Musser R & C d.....	Iowa City	Grove James d.....	Mount Pleasant
Porter J W d.....		Ketchum L & Bro d.....	
Rittermeyer F X d.....		Ludham Bros p m.....	
Carlton J H & Bro d.....	Iowa Falls	Rand & Kaster d.....	
Hoag, Zeno d.....		Schreiner T d.....	
Richardson J C hardwood mill.....		Boyd D L d.....	Mount Vernon
Yerger A d.....	Jefferson	McClellan & Kirkpatrick m and d.....	
Moore & Hoyt m and d (Dubuque Lumb Co).....	Jessup	Wick J E d.....	Murray Station
Taylor Thos d.....		Chambers Bros & Co m and d.....	Muscatine
Hayward d.....	Kellooz	Eckle & Patton d.....	
Andrews J H d.....	Keokuk	Garlock John S d.....	
Hosmer & Baldwin m and d.....		Hershey & Irvine m and d.....	
McGavie & Co d.....		Hoch E d.....	
Magoun & Co d.....		Kirk W T p m.....	
Scroggs J W d.....		Musser P M & Co m and d.....	
Taber & Co m and d.....		Stine S G d.....	
Wells, Felt & Spaulding m and d.....		Union Lumbering Co m and d.....	
Marshall Joshua m and d.....	Kirkville	Turner & Bellamy d.....	Nashua
Butterfield & Co d.....	Knoxville	Dillin C D d.....	Neola
Douley & Garrison d.....		Lockridge W d.....	Nevada
Wadsworth Smith & Co hardwood mill.....	Lake Mills	Gordon Burt & Weston d.....	Newell
Miller Sam'l d.....	Lamville	Nicholson & Fowler d.....	
Albert E T & Son d.....	Lansing	Swazey L T d.....	
Homingway Barclay & Co d.....		McLaren & Meyer d.....	New Hampton
Johnson S B d.....		Williams E d.....	New Hartford
Merrill & Smith m and d.....		Kalbach Isaac & Son d (Oskaloosa).....	New Sharon
Klingaman & Felt d.....	La Porte City	Atwater & Hoskins d.....	Newton
Fleming & Bro d (McGregor Ia).....	Lawler	Curtis & Manning d.....	
Zepley & Van Sant m and d.....	Le Claire	Hanson A P d.....	
Fairchild R C d.....	Le Mars	Eckert & Williams d.....	Northwood
Naples & Alline d.....		Brown T H d.....	Norway
Staples Isaac m and d (Stillwater Minn).....		Farper W L d.....	
Beymers A S d.....	Lenox	McGathery T K d.....	Oelwein
Cole Warren Jr d.....	Leon	Sylvester F d.....	Ogden Station
Fry Jacob hardwood mill.....	Libertyville	Whe-lock & Adams d.....	
Pancoast Joseph d.....		Elwell John d.....	Onawa City
Auracher G d.....	Lisbon	Freeland & Cleghorn d.....	
Smith P E d.....	Liscomb	Reder Theo hardwood mill.....	
Schofield & Son hardwood mill.....	Little Sioux	Sparr C E d.....	Onslow
Goreham & Pelton d.....	Lost Nation	Chute & Cotton d.....	Osage
Peterson Aug. d.....	Lowden	George & Lizotte p m.....	
Barnum J H d.....	Lyons	Harding G F hardwood mill.....	
Buffum G A d.....		Hantington & Griswold.....	
Disbrow M A d and sash doors etc.....		Gilbert Hedge & Co d (Burlington).....	Osceola
Joyce & Smith m and d.....		Rand E D & Co m and d (Burlington).....	Oskaloosa
Langford C E d.....		Kalbach Isaac & Son d.....	Oskaloosa
Magill Chas H d.....		Leighton C d.....	
Stockwell Ira m and d.....		Snyder & Duke p m.....	
Daubenberger & Strauer m and d.....	McGregor	Wray W H d.....	
Fleming W & J m and d.....		Flemming W & J m and d (McGregor Ia).....	Ossian
Seeley & Phelps m and d.....		Kiser J M d.....	Ottumwa
Buttles & Vernon d.....	Malcom	Millard J J & Co d.....	
Moninger Ringland & Summers d.....	Malvern	Thornburg d.....	
Place A D d.....		Wilson J W d.....	Oxford
Buckley G R d.....	Manchester	Kettinger A & Co hardwood mill.....	Palo
Dyer W d.....		Clarnoek C d.....	Parkersburg
Manchester Manufacturing Co.....		McGavie E J & Bro d.....	Pella
Bradley Geo T d.....	Maquoketa	Newport B F d.....	Perry
Calamer Stephen sash doors etc.....		Dean E J d.....	Plainfield
Joiner Bros & Co d.....		Mores W H d.....	Plymouth
Shepardson J B d.....	Marble Rock	Page L A d.....	Postville
Ketchum & Bro d.....	Marengo	Mott J S.....	Prairie City
Morrison A J d.....	Marion	Fish & Hammond m and d.....	
Alexander J S d.....		McGavie E J & Bro d.....	Quarry
Wood Geo F d.....		Steinbeck Silas d.....	Red Oak Junction
Cunningham D W d.....	Marshalltown	Bryson & Son d.....	
Stoddart H d.....		Clark J & Co d.....	
Woodworth W C & Son d.....		Rogers & Son d.....	Ridgeway
Ulsh Postrier & Brewer d.....	Marysville	Allen W H & E T d.....	
Lyman W H d (agent).....	Mason City	Myers & Peck d.....	Rockford
Sprague M A d.....		Emerson & Fay d.....	Russell
Wilson & Herrick d.....		Comstock D F d.....	Sabula
Griffin B d.....	Masonville	Long E & H M m and d.....	
Armentrout & Co d.....	Mechanicsville	Risley & Day m and d.....	
King W W d.....	Mediapolis	Shaw D & Co m and d (Ean Claire Wis).....	St Ausgar
Funk W O d.....	Melrose	Rhames John N d.....	Saylorville
Merrill L & Bros d.....	Millville	Howe W B d.....	Scully Station
Gill M & Son d.....	Minburn	Reeves Bros d.....	Shelby
Brown & Gregory d.....	Mitchell	Caughran J D d.....	Sheldon
Kimball & Mitchell d.....	Mitchellville	Bradley S S d.....	

Lane H C d.....	Sheldon	Cadle C F & W L d.....	Victor
Mykoff Jas d.....		Chadbourne A S d.....	Vinton
Fairfield & Phillips d.....	Shell Rock	Stickney & Bros d.....	
Bryson & Son d.....	Shenandoah	Young & Son hardwood mill.....	
Riley & Grant d.....	Sibley	Avery Spangler & Co d.....	Walnut Station
Schell Levi d.....		Denny J M & Co d.....	Washington
Schuck D M d.....		McCoughey & Co p m.....	Washington
Brown & Yerger d.....	Sigourney	Sheridan & Hardestz d.....	
Hedges & Spaulding d.....	Sioux City	Wilson & Wallace d.....	
Rice H B d.....		Allee & Lindley d.....	Waterloo
Sanborn & Follett hardwood mill.....		Ankeny & Lusch d.....	
Beermaker A d.....	Solon	Beck Newman & Bro.....	
Anthony N B d.....	Stanwood	Cobb & Jones d.....	
Munson T S & Co d.....	State Center	Cutler W H d.....	
Tuthill J W d.....		Johnson H M d.....	
Turner D W d.....	St amboat Rock	Moore M H & Co d.....	
Green B F d.....	Storm Lake	Bodeker & Maas d.....	Waverly
Slutz Theo d.....		Fairfield C d.....	
Stuart C d.....	Stuart	Hunt & Holt d.....	
Dennis & Averill d.....	Tama City	Ewing J & Son d.....	Webster City
Hall B A d.....		Worthington W S d.....	
Lamb C & Son m and d (Clinton Ia).....		Hoover B d.....	West Branch
Culbertson John d.....	Tipton	Gordon A d.....	West Cedar Rapids
Johnson Bros d.....	Traer	Deemer J A d.....	West Liberty
McCormick Bros d.....		Woodward Chas d.....	West Union
Smith John d.....		Woods Hall & Co d.....	Wheatland
Hauser & Son d.....	Union	Seidell & Co d.....	Winthrop
Mossman Alex d.....	Urbana	Bush E H d.....	Worthington
De Wolf James d.....	Vail Station	Paff D C stave factory.....	Yankee Settlement
Taylor J C & Bro m and d.....	Van Meter		

MINNESOTA.

Getchell, C. S. & Co., m and d.....	Afton	Jackson & Russell, d.....	Eyota
Olds & Lord, m and d.....		Robson, John, m and d (Winona).....	
Pray, R. N., p. m.....		Smith, R. R., d.....	Faribault
Seargent, Wm. P., d.....	Albert Lea	Sumner, Jesse, d.....	
Hicks, Wm. E., m and d.....	Alexandria	Turner, J. A., m and d.....	
St. Paul Lumber Co., m and d (see St. Paul).....	Anoka	Walker, H., m and.....	Faxon
Washburn, W. D. & Co., m and d (see Minneapolis).....		Goodsell & Bro., m and d.....	Fergus Falls
Mower, Martin.....	Arcola	Page & Scott, m and d.....	Fergus Falls
Saulter, E. A. D.....	Atwater	Evans, E. E. & Co., m and d (St. Paul).....	Fish Lake
Richards, W., d.....	Austin	Baldwin, D. E., m and d.....	Forestville
Gordon & Cooley, m and d.....	Barnum	Henry, F., m and d.....	
Essler & Bro., m and d.....	Beaver Falls	Mirns Bros.....	Glencoe
Weed & Colson, s. m.....		Tenney, L. H. & Co. d.....	Glyndon
Ellsworth, D., d.....	Belle Plaine	Pierce, L. E. d.....	Grand Meadow
Meldal & Sunde, d.....	Benson	Dudley, John.....	Hastings
Vogel, August, m and d.....		Hersey, Bean & Doe, m and d (Stillwater).....	
Brainard & Whitton, d.....	Bloomington	Herman, J., m and d.....	Henderson
Brainard Lumb. & M'fg Co. m and d.....	Brainard	Garrett, J. M.....	Hokab
Brown, H. A., d.....	Brownsdale	Johnson, Thomson & Bluck, saw and stave mill.....	Howard Lake
Paul, John, m and d (La Crosse, Wis).....		Smith & Gasper, d.....	Janesville
Gilbert, O. S. d.....	Brownsville	Horner, J. W. & Co., stave mill.....	
Paul, John, m and d (La Crosse, Wis).....		Wadleigh & Wirks, d.....	Kasson
Funk, John, d.....	Carver City	Carville & Norgren, m and d.....	Kingston
Schrimpf, A. D.....		Hall & Thompson, m and d.....	
Grannis, S. S., m and d.....	Central Point	Grannis, S. S., m and d.....	Lake City
Brown & Brockway, m and d.....	Champlin	Harding, J. p. m.....	
Kenny, Chas., m and d.....	Chaska	Hersey, Bean & Doe, m and d (Stillwater).....	
Nathan, Geo., Stave M'fg.....	Chicago City	Hulet & Norton, p. m.....	
Laird, Norton & Co., m and d (Winona).....	Clearmount	Humphrey, H. d.....	Lake Crystal
Morrison, H. B.....	Clear Water	Russell, L. G. d.....	
Talbot & Smith, m and d.....	Cleveland	Colman, C. L. m and d (La Crosse, Wis).....	Lanesboro
Warde Bros. & Runions.....	Cokato	Paul, John, m and d (La Crosse, Wis).....	
Pendergast & Chisley, m and d.....	Collingwood	Crocker Bros. & Lamereaux, m and d (Minneapolis).....	Lansing
Lucas, Adam, m and d.....	Cordova	Mc Call, M. d.....	
Weizell, F.....	Dayton	Fiffeld, D. S. & Son.....	Le Roy
Perkins, Bro. & Co. m and d.....	DeLham	Davis, L. B.....	Le Sueur
Parslow, H. C.....	Delano	Paul & Stone, m and d.....	
Frazie, R. L., m and d.....	Detroit Lake	Butler, Chauncey.....	Litchfield
Gill, John, d.....	Dodge Center	Leavitt, S. W.....	
Magee, D. T., d.....	Dover Center	Hill, E. G. & Bro. m and d.....	Little Falls
Howard, J. D., m and d.....	Duluth	Sherman, W. L. d.....	Lyle
Munger & Gray, m and d.....		Dean, J. & Co., m and d (Minneapolis).....	Madelia
Patterson & Mc Quade, p. m.....		Faribault & Carney m and d.....	Manchester
Shaw & Ingalls.....		Beebe, R. W. d.....	Mankato
Weiland H. & Bro., m and d.....		Mc Mahill, Geo. d.....	
Archibald, J. S. & E. T., m and d.....	Dundas	Tisdale Bros. d.....	
Hutchins, John, m and d.....		Severance, C. E.....	Mantorville
Houlton & Nickerson, m and d.....	Elk River	Marsh & Kennedy m and d.....	Maple Plain
Mills, E. P., m and d.....		Bergman, A. m and d.....	Marine Mills
Long, G., m and d.....	Elysian	Sabin & Judd m and d.....	
Dunn, E., d.....	Eyota		

Walker, Judd & Veazie m and d.....Marine Mills
 Langdon, N. B.....Marshall
 Butler, L & Co. m and d.....Minneapolis
 Chase, J.....
 Farnham & Lovejoy m and d.....
 Rollins, John.....
 Ross, J. B. sash, doors &c.....
 Gaines, Cook & Co. m and d.....
 Wheaton, Reynolds & Co., sash, doors &c
 Ankeny, W. P. & Bro. m and d.....
 Bedford, Boyce & Baker m and d.....
 Clark, F. P. m and d.....
 Copeland, Jesse & Son, p. m.....
 Crocker Bros. & Lamereaux m and d..
 Bray, Wilder, & Co. d.....
 Day, L. & Sons m and d.....
 Dean, Joseph & Co. m and d.....
 Eastman, Bovey & Co. m and d.....
 Eldred, W. H. s. m.....
 Judd, W. S. m and d.....
 Langdon, R. B. & Co. p. m.....
 Morrison Bros. m and d.....
 Pottit, Robinson & Co. m and d.....
 Russell & Co. p. m.....
 Smith, Parker & Co. p. m.....
 Union Planing Mill Co. p. m.....
 Wa-hburn, W. D. & Co. m and d.....
 Ingalls Bros. d.....Minneska
 Ingram, Kennedy & Co. m and d (Eau
 Claire, Wis.).....
 Hitter, F. m and d.....Monticello
 Douglass, James d.....Moorhead
 Avery, Jas. T.....Morris
 Adams, C. D., stave m'fg.....Morristown
 Herchev & Son m and d.....
 Norton R M m and d.....
 Osterhant Jas m and d.....
 Keen & Whitcomb.....Nicollet
 Ames, Jesse & Son m and d.....Northfield
 Dwinell E C sash, doors, etc.....
 Mann Chas W.....
 Stewart S P m and d.....
 Whittle & Curlaw m and d.....
 Miller A M m and d.....N P Junction
 Payne J M & Co m and d.....
 Munger Grey m and d.....Oneota
 Phelps Bros m and d.....Otsego
 Frazie R L m and d.....Otter Tail City
 Backus Bros.....Owatonna
 Crocker Bros & Lamereaux (Minneapolis).
 Murray A G d.....
 Pine City Lumber Co m and d (St. Paul).. Pine City
 Fife W W d.....Preston
 Cogel & Betcher m and d.....Red Wing
 Daniels & Simmons.....
 Red Wing Mill Co m and d.....
 Stout Jas H m and d.....Reed's Landing
 Buttles & Herrick p m.....Rochester
 Dodge W H d.....
 Gillman N F p m.....
 Laird, Norton & Co m and d (Winona)..
 Robson John m and d (Winona).....
 Martin S A m and d.....Rush City
 Reiley, Short & Co m and d.....
 Taylor & Co m and d.....
 Foss O p m.....Rushford
 Parker G B (Agent) d.....
 Bridgeman, Coleman m and d.....St Cloud
 Clark N P m and d.....
 Cluck & Mc Clure m and d.....
 Dam F H sash, doors etc.....

Lindsay G W m and d.....St Franc's
 Woodbury D m and d.....
 Valbrecht W & Bro m and d.....St. Michael
 St Paul Lumber Co m and d.....St Paul
 Taylor H J & Co m and d.....
 Anoka Lumber Co m and d.....
 Grant, Mc Caine & Co m and d.....
 Keller John M m and d.....St. Paul
 Evans E E & Co m and d.....
 Munch, Gustave m and d.....
 Prince John L m and d.....
 De Cou & Co sash, doors etc.....
 Metter & Heritage m and d.....St Peter
 Snyder, Damsen & Co m and d.....
 Mc Clure T C m and d.....Sauk Center
 Boulter & Burget m and d.....Sauk Rapids
 Wilder J A d.....Shakopee
 Mirns T m and d.....Silver Lake
 Harriman S m and d.....Somerset
 Coleman C L m and d (La Crosse Wis) Spring Valley
 Paul John m and d (La Crosse Wis)..
 Bronson & Fulsom m and d.....Stillwater
 Hersey, Bean & Brown m and d.....
 Staples Isaac m and d.....
 Seymour, Sabine & Co m and d.....
 St Croix Lumber Co m and d.....
 Proctor J S (Secy. St Croix B Co).....
 Matthews S logger.....
 Nelson C N logger.....
 Tozer David logger.....
 Chalmers & McMillan.....
 Durand E W.....
 Gaslin David.....
 Mc Kusick, Andersen & Co m and d.....
 Mower Martin.....
 Schulenberg, Baecker & Co m and d.....
 Ellison, Smith & Co m and d.....Taylor Falls
 Folsom W H C.....
 Fox P.....
 Mc Court J H.....
 O'Brien John.....
 Ingraham, Kennedy & Gill m and d (Eau
 Claire, Wis.).....Wabasha
 Smith Warren d.....Waseca
 Elliot d.....
 Durr Peter.....Waverly
 Halbrecht.....
 Cole & Laird d.....Wells
 Coleman C L m and d (La Crosse Wis).....Whalan
 Hays W W.....Willmar
 Paulson John.....
 Robbins A B.....
 Gilliland Thos d.....Windom
 Hubbs Chas L d.....
 Coleman C A d.....Winnebago City
 Balcom J & H C.....Winona
 Gage A W & Bro.....
 Horton & Hamilton d.....
 Knight, Bennett & Co m and d.....
 Laird, Norton & Co m and d sash, doors &
 Langdon A sash, doors etc.....
 Robson John m and d.....
 Rose O sash, doors etc.....
 Tucker O C.....
 Youmans Bro & Hodgins m and d.....
 Crocker Bros & Lamereaux m and d
 (Minneapolis).....Worthington
 Sater I N d.....
 Gram Jas sash, doors etc.....Zumbrot
 Hubbard, Wells & Co m and d.....

MISSOURI.

Hill & Co.....Alexandria
 Neure F & Son.....
 Summers & Scoonover.....
 Fieler Robt & Bro m and d.....Altenburg
 Schmidt Jacob m and d.....
 Weinhold Marton.....
 Wyckoff & McFauland d.....Appleton City
 Thompson J. C. Jr d.....Arrow Rock
 Garth H C d.....Aulville
 Sparks W W d.....
 Waterman J C & Co d (Maryville Mo).....Barnard

Phelegan Willis & Balding d.....Belton
 Scott Geo W & Co d.....
 Haines Chas saw mill.....Berger
 Hoehn Chas saw mill.....
 Nelson & Smith saw mill.....Bethany
 Graham Jas saw mill.....Big Creek
 Harlow Greenberry saw mill.....
 Bedford Bogarus & Co p m and sash
 factory.....Bloomfield
 O'Neil Jas saw mill.....Bolivar
 Wilkinson Hiram saw mill.....Boonsborough

Jones B F d.....	Boonville	Miller W H & Co p m.....	Hannibal
Roberts & Lee d.....		Pinger Chas & Co d (St. Joseph Mo).....	
Thro J E d.....		Price J B d.....	
Elliott Lumber Co saw mill and d.....	Bourbon	Rowe & Tolle.....	
Eales T T d.....	Breckenridge	Skinner & Co sash doors etc.....	
Plumb & Co d.....		Ure & Co.....	
Bethelm & Kerr d.....	Brookfield	Farmer & Jones d (Pleasant Hill Mo).....	Harrisonville
Ryder J M d.....		Rice John d.....	Hemetite
Matlack Geo & Co d (St. Louis Mo).....	Brownsville	Lang Geo d.....	Hermann
Moore Jas & Co d.....		Hubbard E L d.....	Holden
Eno E B d.....	Brunswick	McMillen Jas d.....	
Perry J O d.....		Mills T M d.....	
Wilson Peter saw mill.....	Buffalo	Starkey & Christian d.....	
Rogers Francis d.....	Bunceton	Cutter Morgan & Co saw mill.....	Holt Station
Pitcher Adams & Cathron saw mill.....	Burdett	Evans & Brierton saw mills.....	Hopewell
Warner & Son d.....	Butler	Waterman Goodsell & Bro d.....	Houstonia
Pigg D H d.....	Calhoun	Wiles S S d.....	Humansville
James & Sappington saw mill.....	California	Stratton M saw mill.....	Hunnwell
Nischwitz C F d.....		Hurd C d.....	Huntsville
Rosa Geo d.....		Brookings Jas R d.....	
Matis John H d.....	Callao	Smothers & Taylor d.....	Independence
Maupin & Elliott d.....	Camden Point	Gates & Anderson d.....	
Steiger Bros d.....	Cameron	Shortridge John (agent).....	
Burns & Mabon p m.....	Canton	May Edwin and d.....	Fronton
Ellis Wm d.....		Lilly & Smith d.....	Janesport
Hampton John P d.....		Bush & Becker d.....	Jefferson City
Stappes Nelson p m.....		Eaton Henry d.....	
Morris James (agent) d.....	Cape Girardeau	Heinrich Agnes & Son d.....	
Crouch W S d.....	Carrolton	Wallendorf M saw mill.....	
McDonald W d.....		Reding John S d.....	Joplin
Beebe H F d.....	Carthage	Anderson James d.....	Kansas City
Fi-k & Haines saw mill.....		Chester Melville & Co d.....	
McCarthy & Gilbert d.....		Crawford & Crouse saw mill.....	
Moore Bros d.....		Deardorf L d.....	
Fisher Joseph, jr d.....	Cedar City	Dubock & Co d (Hannibal Mo).....	
Street & Bro d.....	Center Town	Leach & Hall d.....	
Robinson James & Co saw mill.....	Chamois	Lovejoy G W p m.....	
Frank J S d.....	Chillicothe	Ludwig Thos J p m.....	
Herne, Harriman & Waples d.....		Merrill J W d.....	Kidder
Williams R B & Co d.....		Temple Jas d.....	Kirksville
Tooley & Jacobs d.....	Clarence	Hammond C G d.....	
Hughes B D.....	Clarkville	Sharp L R d.....	Knob Nostor
Carpenter W H d.....	Clinton	Perkins G H d.....	La Clede
McAllister & Bowling d.....	Columbia	Cathers D B d.....	La Grande
Lœhofner & Tegeler d.....	Concordia	Quinsberry & Farmer d.....	La Plate
Morton J W saw mill.....	Corsicana	Irving & Co d.....	Lathrop
Henderson Wm saw mill.....	Cuba	Wilson J S d (agent).....	Lawson
Lacy Chas C d.....		Montgomery & Brock d.....	Laynesville
Bradley W J saw mill.....	Dalton	Vauston & Loop saw mill.....	Lebanon
De Lassus Placide d.....	De Lassus	Lingsviller John d.....	
Vineyard Jas d.....		Smith & Appling saw mill.....	
Angle, Clarke & Co saw mill.....	Des Arc	Adams Isaac W & Co d.....	Lee's Summit
Burroughs R & Co d.....	De Soto	Collins & Anderson d.....	
Gillet & Gowen saw mill.....	De Witt	Ballard Patrick d.....	Lexington
Bowen John R, jr saw mill.....	Edina	Hale Robert & Bro d.....	
Sheppard Elijah saw mill.....	Egypt Mills	Marshall Ben d.....	Liberty
Tandy, Stearns & Dorsay, saw mill.....	Elenorah	Waples A C d.....	Licking
Elston E saw mill.....	Elston Station	De Forest & Co saw mill.....	Lincoln
Lang & Bro saw mill.....	Farmington	Jones & Granger saw mill.....	Louisiana
Douglass & Bro p m.....	Fredericktown	Carson Geo L d.....	
Kennedy & Thompson p m.....		Dreyfus Hill & Co d.....	
Farmer & Jones d (Pleasant Hill Mo).....	Freeman	Eau Claire Lumber Co m and d (Eau Claire Wis).....	
Stanchfield L S saw mill.....	Gads Hill	Edison Nichols & Co (Clarksville).....	
Lester Eugene W saw mill.....	Gayose	Freeman & Co m and d.....	
Birch T E, jr d.....	Glasgow	Soward & Dyer p m.....	Macon City
Lewis C H d.....		Farrar & Bourk d.....	Marquand
Harrold John S saw mill.....	Glaze City	Graham F M & Co saw mill.....	
Simmons H D.....	Gower	Linn & Farrar saw mill.....	
Hope Geo D d.....	Greenfield	Whitener & Son saw mill.....	
Hope Geo D d.....	Greenwood	Wilkinson W J Jr saw mill.....	
Hines M O d.....	Hamilton	Coleman & Stagner d.....	Marshall
Reddie Geo d.....		Page C G d.....	
Allen & Knowll.....	Hannibal	Muster J S d.....	Martinsburg
Conlon J.....		Tapscott A W d.....	Maryville
Cruikshanks John Jr d.....		Anderson & Bro d.....	
Davis Bockee & Garth.....		Waterman J C & Co d (Barnard).....	Meadville
Dormau Uriah.....		Goodale L N d.....	
Dubach D & Co.....		Marks Abe d.....	Mendota
Dulaney & McVeigh.....		Woodard & Co saw mill.....	Mexico
Hannibal Union Works sash doors etc.....		Coatsworth & Co d.....	
Hearne Herriman & Co.....		Meyer John d (St. Louis).....	
Hibbert John V sash doors etc.....		Wright Josiah d.....	
Hixon G C & Co.....		Guthreys & Haynie d.....	Miami
Northwestern Lumber Co m and d (Eau Claire Wis).....		Hill M C saw mill.....	

Stanley & Stickler d.....	Milan	Schuelle & Querl, n. Main st d.....	St. Louis
Carter C C d.....	Missouri City	Phillibert & Johannng, planing mill, 1502	
Firth Wm d.....	Moberly	to 1518 Market st.	
Hassett Bros d.....		Theo. Bloess, Carondelet Ave. cor. Barton	
Petering E H d.....		d.....	
Porter W W & J B d.....		August Leisse, 609 Chouteau Ave. bet. 6th	
Mathew John L d.....	Monroe City	and 7th sts d.....	
Davis W A & B saw mill.....	Monticello	Boeckeler A & Co m and d.....	
Kerr Wm d.....	Montrose	Boeckenkamp & Surkamp, cor. 9th and	
Morgan P A saw mill.....	Morgan's Mills	Monroe sts. d.....	
Bacon F M d.....	Mound City	Lobsinger, Meegan & Co., Carondelet m	
Barber & Herms saw mill.....	Neosho	and d.....	
Neosho Planing Mill Co.....		Clear Water Lumber Co m and d.....	
Robinson James & Co sash, doors etc.....		Fleitz & Ganahl, 1320 Jackson st. d.....	
Carey saw mill.....	Nevada City	Methudy & Meyer, commission, 22 s.	
Cleland J W d.....	Nevada City	Main st.....	
Southwick & Goodall d.....	New Cambria	Berthold & Jennings, commission, 28 s.	
Fitzhugh J S d.....	New Florence	Main st.....	
Forrest R W d.....	Norborne	Beldsmeier H W & Co Eastern av d.....	
Johns T R d.....	North Springfield	Williams & Alford, commission, 100 s.	
Kennedy & Druhe d.....		Main st.....	
Raithel J G d.....		Clement H S commission.....	
Berry & Bros.....	Omaha	Cole & Glass p m.....	
Petty J J saw mill.....		Cronkhite A H (Wisconsin River Lumber	
Potter B T d.....	Oregon	Co Stevens Point Wis) St James Hotel...	
Carter M S saw mill.....	Osage City	Davitt John W d.....	
Cerny & Vader saw mill.....		Druhe W d.....	
Hollister & Co saw mill.....		Dryden & Beid d.....	
Maxwell J B d and saw mill.....	Osage P O	Hill Lemmon & Co m and d.....	
Hitt B M d.....	Osborn	Hoeker & Hengelsberg d.....	
Armick J F d.....	Otterville	Holmes J A & Co d.....	
Potter & Wharton saw mill.....		Hymers Ed H d.....	
Haycox P S saw mill.....	Overton	Luthy Jas d.....	
Williams H d.....	Pacific	McLvain Robt d.....	
Kiser Wm B saw mill.....	Palmyra	Matlack Geo d.....	
Ross & Kennedy saw mill.....	Paradise	Meyer John, Cass av d.....	
Bower G M d.....	Paris	Mincke G F d.....	
Wilson Wesley d.....		Mississippi Planing Mill Co (Jas Patrick	
Luthey Franklin d.....	Parkville	Pres't)	
Harper & Ball d.....	Pendleton	Naber Chas d.....	
Killian J C saw mill.....	Perryville	Nuelle W & Bro m and d.....	
Crist Bros d.....	Phelps City	Oleott Duross & Co p m.....	
Barton J H d.....	Pierce City	Rippey Geo W & Co d.....	
Tribble Andrew d and saw mill.....	Platte City	Sterling John p m.....	
Hockaday J N & Son d.....	Plattsburg	Wright J C & Co p m.....	
Stearns d.....		Yaeger H C South Main st commission.....	
Beagle & Meyers d.....	Pleasant Hill	Hodges & Sons saw mill.....	Salem
Farmer & Jones d.....		Wofford C P & Co saw mill.....	
Hope Arthur d.....		Thornton J saw mill.....	Saline City
Boyce B F & Son sawmill.....	Point Pleasant	Dulaney Thos G d.....	Salsbury
Barkley David saw mill.....	Potosi	Wayland Ely d.....	
Smit Chas D saw mill.....		Young Geo saw mill.....	
Smith W D & Bro saw mill.....		Waterman & Nast d.....	Savannah
Walton & Co d.....		Bloess W & Co d.....	Sedalia
Cadle Henry d.....	Princeton	Gauss C H d.....	
Leeper John P d.....	Richmond	Ritter Richard d.....	
Baucher E H saw mill.....	Richwoods	White & Meyer d.....	
Traub Geo & Co d.....	Rockport	Warren W d.....	Shelbina
Cresbourn Chas d.....	Rolla	Ralph Jas d.....	Shelbyville
Russell Giles saw mill.....	Russell's Mills	McBride Jr C saw mill.....	Silver Lake
Holrah & Machens d.....	St Charles	Hendricks & Co saw mill.....	South Point
Smith Job d.....	St James	Ganahl Fidel d.....	South St Louis
Thummell W G d.....		Lobsinger Meegan & Co m and d.....	
DeClue John p m.....	St Joseph	Knott & See p m.....	Springfield
Dougherty Ray & Co d.....		McDonald O G d.....	Stewartsville
Hamilton Bros saw mill.....		Shapter Wm saw mill.....	Taos
Hoagland Geo T & Son d.....		Marbes Chas d.....	Tipton
Lyon Geo d.....		Hannestein W saw mill.....	Tuscumbia
Pinger Chas & Co d.....		Mabrey Thos.....	Twin Springs
Smith & Swope saw mill.....		Willard P G & Son d.....	Utica
Waterman & Barnard d.....		Savage E d.....	Vandalia Station
Phillip Gruner, Jr., s. e. cor. of 9th st. and		Mundy W W d.....	Verona
Cass Ave d.....	St. Louis	Lowe W d.....	Warrensburg
Worheide & Luehrmann, planing mill, 813		Moore & Kinsell d.....	
Cass st.....		Schowengendt E & Son d.....	Warrenton
Schulenburg & Boeckeler m and d.....		Trentman, Uarup & Co p. m.....	Washington
Lesley, Garnett & Co., planing mill, 124		Fletcher W d.....	Waverly
Olive st.....		Miller Jacob d.....	Wellsville
Parker, Spencer & Co., 3,922 Broadway m		Allen Jas P d.....	Weston
and d.....		Wells John B saw mill.....	
Knapp, Stout & Co., Bremen Ave m and d		Morse C C d.....	Windsor
Patrick Bros. Lumber Co., Bremen Ave d.		Graves & Nichols d.....	Jamesport

NEBRASKA.

Dean, Dennis & Co d.....	Ashland	Godfrey & Co d.....	Lincoln
Wiggerhorn E A d.....	Beatrice	Grant P J d.....	
Lyman & Co d.....		Jones W G & Co d.....	
Parst & Marsh d.....		Monell & Lashley d.....	
Foster N d.....	Bell Creek	Noyes E d.....	Louisville
Crowell C C & Co.....	Blair	Moore & Sunderland d.....	Lowell
Bell John R d.....	Brownville	Hill W E d.....	Nebraska City
Clemans A F.....	Coleraine	Monroe & Dillan d.....	
Turner & Hulst d.....	Columbus	Linsabaugh W n d.....	Nebraska City
Sawyers & Leach d.....	Covington	Hoagland Geo T & Son d (St Joe).....	Omaha
Caldwell & Slade d.....	Crete	Young & Co (Clinton Ia) m and d.....	
Graves & Williams d.....	Fairbury	Moyer A sash, doors etc.....	
Jaynes D P d.....	Fairfield	Turner Chas d.....	
Edwards H L d.....	Farmington	Foster W M m and d.....	Papillion
Lyon J F d.....	Falls City	Pomeroy & Kennedy d.....	Pawnee City
Rickards & Merrill d.....		Tisdale F A Jr & Co d.....	
Thacker & Davis saw mill.....	Falls City	Gardiner & Robinson d.....	Pebble Creek P O
Hoagland Geo & Son d (St Jo Mo).....	Grand Island	Waterman H A & Son d.....	Plattsmouth
Peck & Meston d.....	Harvard	Faulkner R & Co d.....	Schuyler
Ballard J H d.....	Hastings	Barrett W B d.....	Seward
Cox d.....		Sorter Isaac B & Son d.....	
Grannis A B d.....	Hebron	Gray W H & Son d.....	Sutton
Tinker E P d.....	Humboldt	Monell, Lashley & Weed d.....	
Sullenberger, Newton & Landon, saw mill.....	Ionia	Foster H P d.....	Tecumseh
Hedges & Granger d (Sioux City Ia).....	Jackson	Sanders Wm d.....	Unadilla
Van Alstyne W L d.....	Juniata	Crowell C C & Z A d.....	West Point
Babcock F C d.....	Lincoln		

KANSAS.

Kuney J & Co d.....	Abilene	Patterson J C d.....	Girard
Rice & Floyd d.....	Alma	Dudgeon F A & Co d.....	Grasshopper Falls
Gregory & Herrick d.....	Arkansas City	Brinkman G L d.....	Great Bend
Channell S P d.....	Atchison	Bunting John d.....	Hanover
Easley Sherer & Stone d.....		Treat M J R d.....	Hays City
Gillespie G W & Co saw mill.....		Bause J P d.....	Hiawatha
Hixon G C & Co d (Hannibal Mo).....		Spear I N d.....	Holton
Jones & Co d.....	Baxter Springs	Dickey Jason d.....	
Lukens David d.....		Williams & Woener d.....	Humboldt
Clark H S d.....	Belle Plaines	Amos John d.....	Humboldt
Smith J H d.....	Beloit	Stevens & Co d.....	Hutchinson
Patter E M d.....	Blue Rapids	Edwards W C d.....	
Campbell Geo & Alex.....		Bradford McCoy & Co m and d (Quincy Ill).....	Independence
Holbrook T saw mill.....	Brookville	Culver & Rewe d.....	Iola
Stakes G B d.....	Bunker Hill	Hunt E S d.....	Irving
Mynant J B d.....	Burlingame	Rogers L F saw mill.....	Island
Leslie M F d.....	Burlington	Boller H A d.....	Junction City
Voorhis A L d.....	Cedar Point	Stickney A C d.....	
Miner S E & Co d.....	Centralia	Green M T d.....	La Cygne
Cross David & Sons saw mill.....	Chanute	Bruce C & Co d.....	Lawrence
Smith L C d.....	Cherokee	Grover & Reddington.....	
Clippinger P & Son d.....	Chetopa	Lewis & Allen d.....	
Churchill & Co d.....	Clay Center	Lewis & Benson d.....	
Eaton Z A & Co saw mill.....	Clyde	Simpson Bros d.....	Leavenworth City
Manlove L d.....	Colody	Angell & Foster.....	
Brown & Co p m.....	Columbia	Chambers Bros m and d (Muscatine Ia).....	
Officer R W d.....	Concordia	Colly & Beckford d.....	
Tyler M S d.....	Council Grove	Ingersoll Jerome d.....	
Smith G W (agent for Johnson & Bridges).....	Edgerton	Munson & Burrows p m.....	
McKircher & Mitchell d.....	Edwardsville	Plummer & North saw mill.....	
Allen Bros d.....	Ellsworth	Spartley & Taylor saw mill.....	
Campbell D W d.....	Emporia	Bower & Bradshaw d.....	Lenexa
Edwards W C d.....	Eudora	Green & Byrne d.....	Louisburg
Colton Bros d.....	Eureka	Goodnow F d.....	Macpherson
McLeon E C d.....	Florence	Haight & Touts d.....	
Allen F M & Co d.....	Fontana	Tyler M S d.....	Manhattan
Faubie J M & Co d.....	Fort Scott	Richardson & Clark.....	Marysville
Kuny Southwick & Co d.....	Frankfort	Thomas R A & Co d.....	Muscotah
Armor Thos saw mill.....	Fredonia	Brown S A & Co d.....	Neosha Falls
Pierce C F & Co (slo at Wichita & Florence).....	Gardner	Covert Parsons & Cozine d.....	
Lothholz Chas d.....	Garnett	Muse Spivey & Co d.....	Newton
Clogston & Allen saw mill.....	Geary City	Dorman & Gorsline d.....	Olathe
Raymond M B d.....		Hardin E F & Co d.....	
Pierce Chas F & Co d (Emporia).....		McCarthy J N d.....	
Dorman N d.....		McNabb J A d.....	Osage City
Whare H E & Co d.....		Hunsicker Isaac K d.....	Osage Mission
Brady A d.....		Gittings Louis d.....	Oswego
Filkins D J.....		Mills D C & Bro d.....	Otawa
Thorne W H d.....		McDonald Kemper d.....	Oxford
McCoy W d.....		Richmond Bro d.....	
Crane J P d.....			
Flickeuger Robt saw mill.....			

Dahl W saw mill..... Ozaukee
 Thayer J E & Son d..... Paola
 West A S & Son..... Parkerville
 Wallis J A d..... Parkerville
 Calkins & Fisher d (Chicago Ill)..... Parsons
 Mixell W d.....
 Vinneman B & Co d.....
 Campbell G W d..... Peabody
 Chenault Bros d.....
 Edwards W C & Co d..... Peace
 Blaker & Bro d..... Pleasanton
 Horr Henry d..... Pomona
 Ricksecker G V d.....
 Waterman & Hobbs d and sash doors etc..... Russell
 Yoxall Sons & Co d.....
 Marbough & Block d..... Sabetha
 Turner & Sons d.....
 McHale P H d..... St Marys
 Eberhart & Sudendorf d..... Salina
 Goodnow Frank d.....
 Congdon W d..... Sedgwick City
 Burnett A H d..... Seneca
 Meacham J C d.....

Pendleton B H d..... Solomon City
 S L Choate d.....
 Rogers J C & Co d..... Spring Hill
 Bradford McCoy & Co m and d (Quincy Ill)..... Thayer
 Reed C, d..... Topeka
 Tipton Bros d.....
 Wilder & Eck d.....
 Pope Clement d..... Troy
 Boetcher A F & Co..... Wamego
 Prunty Jas L d.....
 Hoak Thos d..... Washington
 Baker A M (agent for Hixon & Co Hanni-
 bal Mo)..... Waterville
 Johnson & Bridges.....
 Palmer & Orton d..... White Cloud
 Taylor & Ortons, saw mill.....
 Davidson & Switzer d..... Wichita
 McClure W P & Co d.....
 Mills & Stearn d.....
 Pierce C F d (Emporia Ka).....
 Shellabarger Oliver d..... Wyandotte
 Holsberlein & Wholmeier d.....
 Wolcott A G d.....

NEW YORK.

Dunlam & Co J W d..... Albany
 Moir James d.....
 Pierce & Co m and d..... Buffalo
 Bolter & Recktenwalt p m and sash etc.....
 Pooley Reinhardt & Co p m and d.....
 Loomis John S p m sash etc..... Brooklyn
 Pease Edward C p m sash etc.....
 Ackerman & Son d..... Edmeston Center
 Miner A W d..... Friend-ship
 Marvin R N d..... Jamestown

Lee Box & Lumber Co d and p m 11
 ave and 21 st..... New York City
 Chapin A & W & Bro d 23d cor 11 ave
 International Ceiling Co 23 South
 William st.....
 Menzies W & Son d ft of W 44 st.....
 Moore J G 96 Wall st (Burnettizing Co)
 Godfrey Wilson d 82 Wall st.....
 Wells & Boutecou & Co 344 West st.

OHIO.

Alpena Lumber Co..... Cleveland
 C Chambers & Co d.....
 Richardson & Wadsworth d.....
 Sheldon S H & Co d.....
 Albro E D d 507 west 6th st..... Cincinnati

Barr Henry d 458 W 6th st..... Cincinnati
 Britton Isaac d 501 W 6th st.....
 Hubbard R B & Co m and d..... Sandusky
 Campbell L A & Co..... Toledo
 Gilson J E.....

ILLINOIS.

Stewart John m and d..... Backberry
 Hartman & Cook d..... Clayton
 Davis Cyrus A d..... Dixon
 Lovington John B d..... East St Louis
 Benedict Franz d.....
 Harnish M E d..... Lanark

Anawalt Denkman & Co m and d..... Rock Island
 Keators Wilson & Co m and d.....
 Keed M T d.....
 Robinson D T d.....
 Weyerhaeuser & Denkmann m and d.....

NEW JERSEY.

Childester F B p m..... Jersey City
 Taylor Bros..... Montclair
 King W d..... Newark

Ripley David & Sons m and d..... Newark
 Watson Twitchell & Clark m and d.....

MASSACHUSETTS.

Shephard Hall & Co No 6 central wharf..... Boston

Fernald W A No 3 central wharf..... Boston

VERMONT.

Shephard Davis & Co d sash mould'gs etc Burlington

Knox Charles K..... Burlington

PENNSYLVANIA.

Lane N B..... Brackwayville
 Carroll Geo & Bro d and p m..... Erie
 Wheeler & Hill d.....
 Ketchum & Co m and d.....
 Walbridge C H d.....
 Erie Lumber Co d.....
 Clemens & Co d.....
 Webster & Culbertson d..... Girard
 Bigler & Son m and d..... Harrisburg
 Williams Daniel & Son d 6th st..... Philadelphia

Galvin T P & Co d head of N Del ave Philadelphia
 Harrison Joseph S d Shackamaxon st
 wharf.....
 Woolverton & Tinsman 1151 Beach st
 Goodell Braum & Waters 1507 Penn ave
 Taylor & Hoffman d 2040 Market st
 Hochkiss & Barber m and d..... Williamsport.
 Fessier P G & Co m and d.....
 Peck D M m and d.....
 Reading Fisher & Co m and d.....

MISCELLANEOUS.

Cooke W C..... Pensacola Fla
 Skead J m and d..... Ottawa Canada

Hatchitt Ziegler & Spottswood d..... Frankfort Ky
 Towie Bros m and d..... Dutch Flat Cal

THE

Wisconsin Lumberman

IS devoted exclusively to the Lumber interests of the Northwest, and will endeavor to become the champion and advocate of all measures pertaining to the welfare of those interests. Statistics and information will be gathered and examined with great care, that THE WISCONSIN LUMBERMAN may become standard authority with the manufacturers and dealers throughout the Northwest.

At least one member of the editorial corps will be traveling almost constantly through the Pineries of Wisconsin, Minnesota and Michigan, seeking information, statistics and opinions from reliable sources. Illustrations of prominent lumbermen and scenes throughout the different pineries will form a prominent and attractive feature of THE WISCONSIN LUMBERMAN, thus rendering it a pleasant and welcome visitor to the family of every Manufacturer, Logger, Landowner or Raftsman in the Northwest.

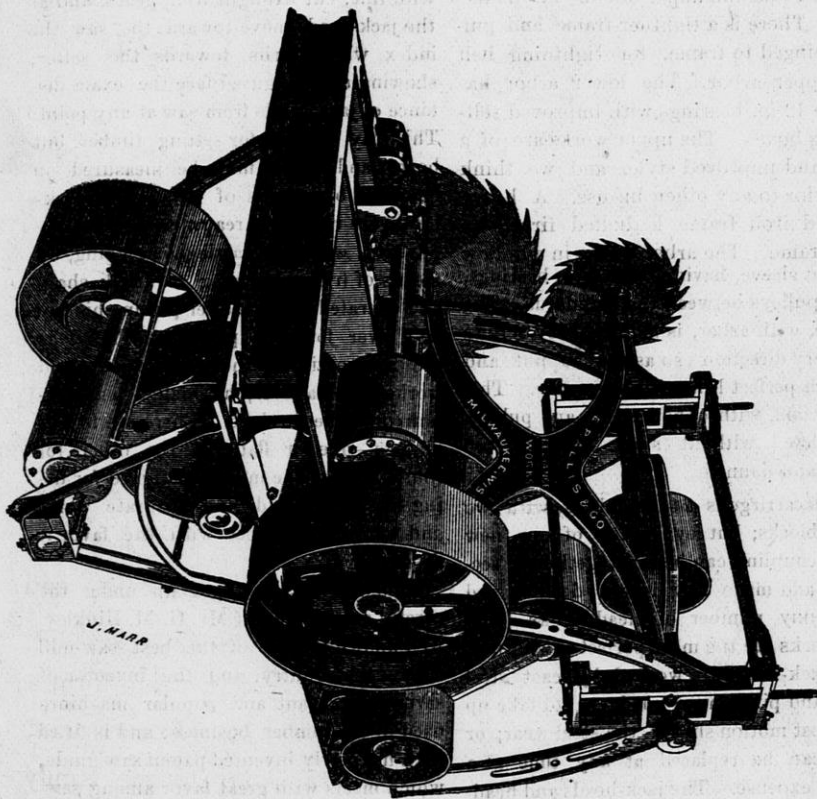
THE WISCONSIN LUMBERMAN will be increased in size in proportion as its patronage will warrant. It is for the manifest interest of all persons engaged in lumbering to assist in substantial manner our efforts towards furnishing a class publication that shall rank first among its kind.

THE WISCONSIN LUMBERMAN PUBLISHING CO.,

Grand Opera House, 64 Oneida St.,

MILWAUKEE, WISCONSIN.

New Iron Frame Double Circular Saw-Mill.



A Description of Interest to Practical Mill Men—A Fine Product of the Reliance Works of E. P. Allis & Co.

We present above an illustration of a new Iron Frame Double Circular Saw Mill recently placed before the public by Messrs. E. P. Allis & Co., of the Reliance Works, in this city, with detailed description for the benefit of our readers.

This mill has iron saw frame, 10 inches deep, and heavily flanged top and bottom. The feed is belted from tail of arbor and gig, driven by the tight side of main belt, working on a 30-inch pulley. The pinion shaft is driven by a 30-inch friction pulley, with 12 inch face and solid web center, turned all over, and is worked between the feed and gig paper frictions—which are 12 in. diameter and 13 in. face—by means of an eccentric box, operated through levers by

the sawyer. These paper friction pulleys are so arranged as to be raised or lowered with ease, as may be necessary to secure perfect adjustment. The arbors are of steel, the lower one being in diameter and the upper one 2½ in. diameter. There is a tightner-frame and pulley hinged to frame, for tightening belt to upper arbor. The lower arbor, has three 12 in. bearings, with improved self-oiling boxes. The upper works are of a new and improved style, and we think superior to any other in use. A heavy arched iron frame is bolted firmly to saw-frame. The arbor works in a hollow arched sleeve, having three 8 in. bearings, with pulleys between the standards. The sleeve, with arbor, is adjustable by screws in every direction, so as to be put and kept in perfect line with lower saw. This saw-frame, with upper works and pulleys complete, without saws, weighs ten thousand pounds.

The carriage is 24 feet long, with two head-blocks; but by means of our new rigid coupling can be put together in sections and made any length desired, and with any number of head-blocks. The set works are the most perfect now in use. The jack-heads are worked by cast steel rack and pinion, so made as to take up any lost motion should the steel wear; or they can be replaced at any time at a slight expense. The jack-heads and head-blocks are faced with steel plate, which

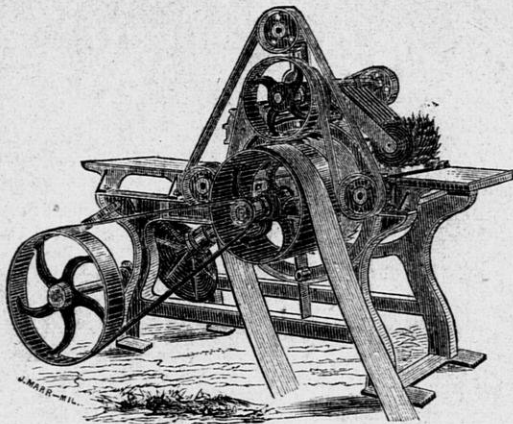
can also be renewed at a slight expense. The set-shaft is 3 in. diameter, as are all the shafts in the mill. On the set-shaft there is a steel ratchet 18 in. diameter. The index wheel is geared to set-shaft with fine, cut wrought iron gears, and as the jack-heads move toward the saw the index wheel turns towards the setter, showing on its figured face the exact distance of jack-heads from saw at any point. This may be used for setting timber, but board and plank may be measured on quadrant by means of pins. The jack-heads are run back, ready to receive the next log, while the carriage is giggering, by means of friction gearing to truck shaft, and operated by the setter placing his foot on a lever for that purpose. The dogs are automatic in their movement, and worked with a lever, no mallet being required on the carriage. There are two sets of dogs—one for flat and the other for round logs. The mill is designed for doing the most rapid and accurate work, and we hope will meet with the favor it deserves.

This mill has been got up under the careful supervision of Mr. G. M. Hinkley, well-known as one of the best saw-mill men in the country, and the inventor of several important and popular machines used in the lumber business; and is fitted with his newly invented patent saw-guide, which meets with great favor among saw-mill men.

A Description of the Patent Saw-Mill—A Fine Product of the Reliable Works of E. P. Allen & Co.

The mill is shown in illustration of color and giggering by the right side of the saw. The carriage is 24 feet long, with two head-blocks; but by means of our new rigid coupling can be put together in sections and made any length desired, and with any number of head-blocks. The set works are the most perfect now in use. The jack-heads are worked by cast steel rack and pinion, so made as to take up any lost motion should the steel wear; or they can be replaced at any time at a slight expense. The jack-heads and head-blocks are faced with steel plate, which can also be renewed at a slight expense. The set-shaft is 3 in. diameter, as are all the shafts in the mill. On the set-shaft there is a steel ratchet 18 in. diameter. The index wheel is geared to set-shaft with fine, cut wrought iron gears, and as the jack-heads move toward the saw the index wheel turns towards the setter, showing on its figured face the exact distance of jack-heads from saw at any point. This may be used for setting timber, but board and plank may be measured on quadrant by means of pins. The jack-heads are run back, ready to receive the next log, while the carriage is giggering, by means of friction gearing to truck shaft, and operated by the setter placing his foot on a lever for that purpose. The dogs are automatic in their movement, and worked with a lever, no mallet being required on the carriage. There are two sets of dogs—one for flat and the other for round logs. The mill is designed for doing the most rapid and accurate work, and we hope will meet with the favor it deserves. This mill has been got up under the careful supervision of Mr. G. M. Hinkley, well-known as one of the best saw-mill men in the country, and the inventor of several important and popular machines used in the lumber business; and is fitted with his newly invented patent saw-guide, which meets with great favor among saw-mill men.

ATTENTION LUMBERMEN!



GANG BOLTER.

YOU CAN GET, ONLY AT THE

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The Best Steam Engine,
The Best Circular Saw Mill,
The Best Water Wheel, (new invention.)
The Best Shingle Mill, “
The Best Gang Edger, “
The Best Gang Lath Mill, “
The Best Gang Bolter, “
The Best Automatic Bolter, “
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But we make a SPECIALTY of making the BEST MACHINERY for manufacturing
Lumber, Shingles, Lath, etc.

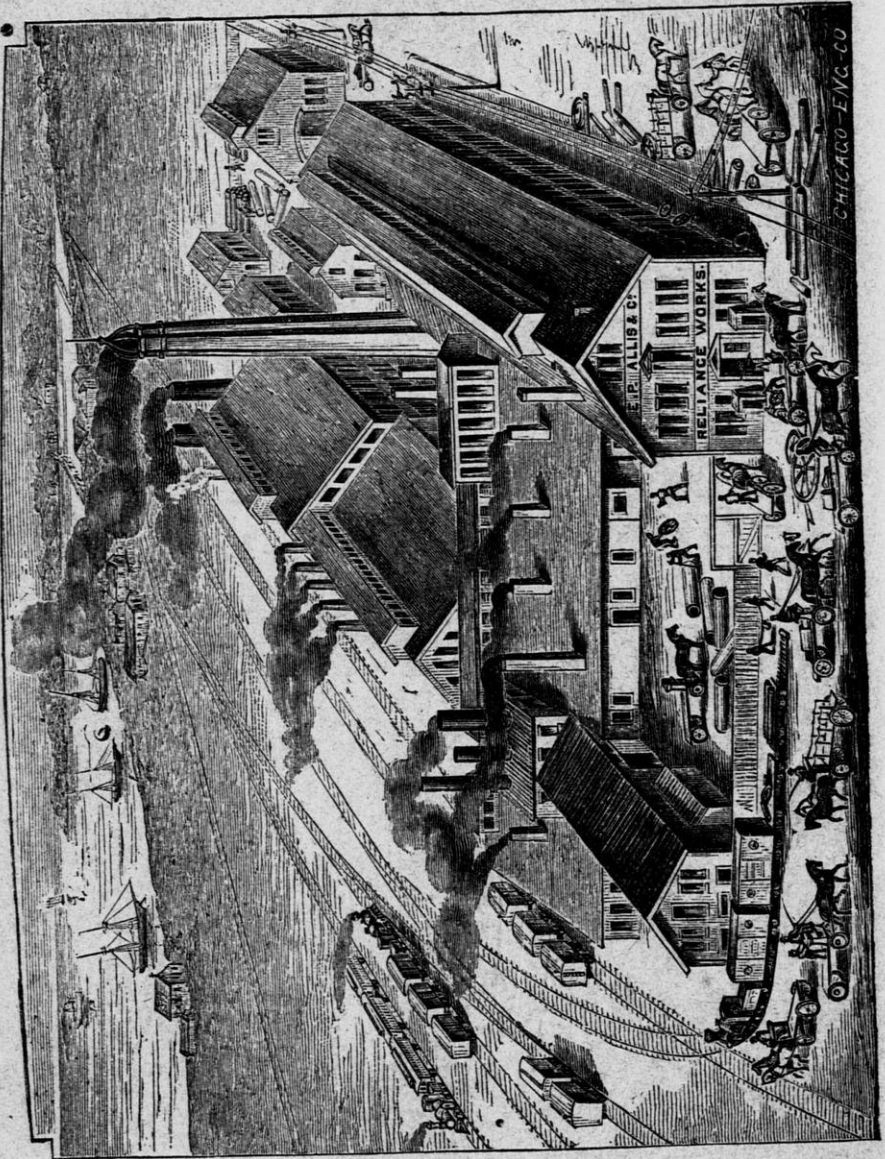
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MANUFACTURERS OF
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