The Institute has attempted to obtain the best original sopy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.


Coloured covers/
Couverture de couleurCovers damaged/
Couverture endommagéeCovers restored and/or laminated/
Couverture restaurée et/ou pelliculéeCover title missing/
Le titre de couverture manqueColoured maps/
Cartes géographiques en couleurColoured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Bound with other material/
Relié avec d'autres documents
Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de i'ombre ou de la distorsion le long de la marge intérieureBlank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible. ces pages n'ont pas été filmées.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.


Coloured pages/
Pages de couleur


Pages damaged/
Pages endommagées


Pages restored and/or laminated/
Pages restaurées et/ou pelliculées


Pages discoloured, stained or foxed/
Pages fécolorées, tachetées ou piquées


Pages detached/
Pages détachées


Showthrough/
Transparence

Quality of print varies/
Qualité inégale de l'impression

Continuous pagination/
Pagination continue


Includes index(es)/
Comprend un (des) index

Title on header taken from:/
Le titre de l'en-tête provient:


Title page of issue/
Page de titre de la livraison

$\square$
Caption of issue/
Titre de départ de la livraison


Masthead/
Générique !périodiques) de la livraison

Additional comments:/
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/ Ce document est filmé au taux de réduction indiqué ci-dessous.



## Vol.usir XVIII. Nusure 2.

$\left\{\begin{array}{l}\text { Tarars, \$s.00 Pur Year } \\ \text { Single Copies, so Cenis. }\end{array}\right.$


# Magnolia Metal 

In Use by Eight Leading Governments.
BEST ANTI-FRICTION METAL
For fill Machinery Bearings

## MAGNOLIA METAL GO.


ownerg and gole manufacturere cone 74 Gortland Street, NEW YORK unces
chícago Office:

TRADERS BUILDING.
Messis. Cayerhill, Learmont \& C0., Agents.

- London Office: No. 49 QUEEN VICTORIA STREET, LONDON, E. C.



## ECONOMY <br> Is a Most Important Consideration in a Boiler Feeder ....



Is the Most Economical and Durable Device for Feeding the Boiler ever placed on the Market. . . . Sales: of 125,000 in ten years in the United States and Canada attest its merit.

Brand Fivito :owr PEMBERTHY INJECTOR CO.
langest Injector Manufacumers in the World. 226 Abbott St., DEIRROIT, MICH.

## John Bertram \& Sons canada tool works

pundas $\qquad$ ON2AIRIO.

- dny onc desiting a good Sccond-Hand Trol, should write us for prices. Ilave sereral we will dispose of at a largain. correstondence solicited.
ac cleveraxis
i. F. ci.bveliand J. L. Goodhue \& 60 .

L EATHER BELTING …: and LACE LEATHER Danville, Que.

## Silver Solder

For Repairing
 Price $\$ 1 . \infty$ per ounce, in to ounce lots.

A 11 Grades of

## CROSS-CUT SAWS

at Lomest Prices


## The "Burns" Patent Handle



PATENTED JUNE 26th, 1893
Positively the Strongest Handle Made.
Ask your Hardware Merchant for our Goods. -:- Special Quolations on Large Quantities.

## No. I IRON FRAME OSCILLATING CANO

## SAW SASHES OF ALL WIDTHS

We manufacture a
Complete Line of

> HIGH GRADE SAW-MILL MACHINERY

## Prescott Band Mills

Perkins Shingle Mill Machinery Covel's Tools for the care of Saws
Engines, Boilers, Etc.

CATALOGUES ON APPLICATION

We are prepared to furnish plans, specifications, and build mills complete of any capacity, or to remodel old mills.

- Write for prices, informing us what your requirements are.



## The Wm. Hamilton Mfg. Co., Ltd.

# THE CANADA LUMBERMAN 

## THE LATE HON. LOUIS TOURVILLE.

Earse in November, after a somewhat protracted illness, Hon. Louis Tourville, member of the Legislative Council of Quebee, and president of The Tourville Lamber Mills Co., died in the city of Montreal. Ever since his severe illness of last year he had been feeling unwell, but was not compelled to withdraw from business until a few days previous to his death. Deceased was prominently connected with many commercial enterprises of the province, and was recognized as an eminemty successful business man.

Hon. Mr. Tourville was born on February $13^{\text {th, }} 1831$, in the city of Montreal, and was therefore $\sigma_{5}$ years of age. After receiving a sound commercial education, he was employed as dry roods salesman, and in the year 1854 embarked in that business on his own account, and afterwards conducted a grain and provision store. In 1880 're established the lumber firm of Tourville \& Co., his partner being the late Mr. Joel Leduc. In this venture he was remarkably successful, and some years afterwards the name of the firm was changed to The Tourville Lumber Mills Company. The heaciquarters of the company were in Montreal, and the saw mills located at Louiseville, Nicolet and Pierreville. In 1891 incorporation was granted, the capitalization being $\$ 250,000$. In the vicinity of thirty-five million feet of lumber are handled each year, large cargo shipments being made to foreign markets.

Not alone to the lumber business did the deceased direct his attention. In 1873 he founded the Hochelag: Bank, of which he was president until the year 1878 . He had also been president of the Montreal Exposition Company, the South Shore Railway Company, and the Imperial Electric Light Co., an honorary director of the Equitable Life Assurance Company of New York, and a member of the Council of the Board of Trade.

Mlr. Tourville was appointed to the Legislative Council by the late Mr. Mercier in 1888 in recognition of the signal service he rendered to the Liberal cause in the province, and had ever accorded a hearty support to a policy of international development of her own resources. By hits death the Liberal party are placed in a minority of two in the Legrislative Council.

In the year 1850 he married Miss C. St. Jean, who died three years ago. A family of six ctiildren survive him.

A subscriber to the Wood Worker writes that he has found the best way to pile lumber which isito go into the dry kiln is to piace it edgewise, properly supported beneath, and with strips between to allow sir circulation and close enough tögether to prevent any sagging sidewise of the lumber to be dried. A little more misture on one edge is not nearly so bad as too much on one side.

## BRITISH COLUMBIA SHINGLE MILLS.

Our representative in British Columbia furnishes the following particulars of some British Columbia shingle mills :

## II. H. Splicer \& co.

Among the largest manufacturers of shingles in the western province are Messers. H. H. Spicer \& Co., of Vancouver. This business was established on False Creek, at the end of Cimbie street, in 1888, and has continued to grow ever since. The output is shipped to all parts of the Dominion, as well as to the United States, some going east of the Mississippi river.

The premises have a frontage on False Creek of 187 feet. The Canadian Pacific Railway track


Time late hos. louis Tourvile.
runs through the yards. The principal output of this establishment is shingles, which have a farreaching reputation. The various buildings are thoroughly well equipped with the most improved machinery, including a lerkins ten block machine, manufactured by the Willian Hamilton Mfg. Co., and two Challoner double block machines. Three large boilers and two engines, $18 \times 3^{6}$ and $14 \times 20$, supply the power. Selffeeders are used for conveying the saw-dust to the furnaces. The new dry-kiln consists of a 7,000-foot heater and a 110 -inch fan, driven by a $7 \times$ io inch engine. The capacity of this kiln is two and a quarter million shingles. The total capacity of the mill is one hundred million shingles per annum. From 55 to 65 men are employed at the mills, and from 25 to 35 in the woods. As will be noted, the shipping facilities, both by water and rail, are excellent.
hastinge shingie manufacturing company.
Messrs. James A. and Robert MciNair established the business at Hastings known as the Hastings Shingle Manufacturing Co. three years ago. The shipments from this firm are also ex-
tensive, and extend throughout Canadat and the United States, some hating been made to Bosston and other Athantic sea ports.

The main mill is $60 \times 35$ teet, equipped with the most modern machinery. The dry-kiln is $100 \times 35$ feet. Various other buildings complete the establishment. A staff of 25 men are employed in the mill, which, when ruming day and night, has a capacity of forty million shingles annually.

A second mill owned by this firm was destroyed by fire about March last, and in six weeks another one was built and running. This, like the former, is equipped with the most modern machinery, and affords enployment for 50 men. It has a yearly capacity of forty million shingles.

This firm control the output of the Buse shingle mill, the capacity of which is twenty million shing!es per ammom, thus making a total capacity for this firm of one hundred million shingles anomally.

They have several thousand acres of very fine cedar limits on Burrard Inlet, from which their cedar blocks are supplied. archile menatr.
Another shingle establishment at Hastings is owned by Archie McNair, and was established three years ago.

The concern has a well-equipped plant, operated by steam power, and using the latest appliances. A specialty is made of red cedar shingles, and the output averages ten millions per annum. A ready sale for these is found in all parts of Ontario, the Northwest, and in the Eastern United States markets.

## WOOD PULP BICYCLE FRAMES.

Woon pulp is the latest material for the making of frames for bicycles. The use of wood after it has been ground up and reduced to a pulp is not so new as many people suppose. As tar back as 1719 a Frenchman named Reamur pubiished an essaty upon the subject, taking his hint from the wasps, whose paper-like nests are literally made from wood pulp manufactured by those insects. But it was only 30 or 40 years ago that any practical trial of the matter was made, and it is almost wholly within the last quarter of a century that the industry has begun to attract attention and assume importance. For some time past railroad car wheels have been made from wood pulp, and also many other things which are exposed to great strain in use, and now the attention of bicycle makers has been attracted to this useful article. - Cincinnati Tribunc.

Resolutions have been passed by the Board of Trade at Thorold and Owen Somnd reguesting that the Gowernmen impose an export duty on pulp wood.
The total cut of the Minneapolis saw mills in 1895 was $+79,000,000$ fect. In isigo a reduction of 37 per cent. was made, the production being 300,000,000 feet.

## AGAINST FREE LUMBER. <br> United Stathe Lumermen Request the Restoration of an labort Duty,-Prermanent Organization Efrected to Consider Tariff Ligislation.

In response to a call issucd by the publishers of the Timberman and Northwestern Lumberman, of Chicago, acting under instructions from the Southern Lumber Manufacturers' Association, about 150 delegates convened in the city of Cincinnati, Ohio, on the 16 th of December, to discuss the tariff question and to take action to secure the restoration of an import duty on lumber. Delegates are said to have been present from every lumber state in the union, and the representation included wholesale and retail dealers and manufacturers.
Upon opening the convention, Mr. Judson, of the Northwestern Lumberman, was called upon. He divelt upon the injurious effect of Canadian competition in lumber, and stated that over $\$ 500,000,00 c$ were invested in mill plants in the United States, giving employment to more than half a million persons, to whom $\$ 141,000,000$ in round numbers was paid in wages annually.

Mr. Defebaugh, of The Timberman, followed, delivering an eloquent and carefully prepared address, and submitting the following figures for the consideration of the delegates :
mportation of canadin boards, deals and planks to the united states.

| Year. | Thousand Feet. | Value. |
| :---: | :---: | :---: |
| S | 608,326 | \$7,497,078 |
| 1889 | 747,842 | 7,804,163 |
| 1890 | 659,703 | 7,744,954 |
| 1891 | 757,1.49 | 8,498,046 |
| 1892 | 653.134 | 7,539,766 |
| 1893 | 742,351 | 8,217,331 |
| 1894 | 514,461 | 6,134,204 |
| 1805 | 600,809 | 6,859,532 |
| Six mo | 6 262,002 | 3,662,0.41 |
| Year | . 786,209 | 8,505,6:4 |
| Three | 6225.396 | 2,360,896 |
| Nine | 549,522 | 5,790,038 |

## mportations of canadian shingles

From Year Thous'd. Value.

Nova Scotia, New Br'nsw'k, elc. 1890-1 58,687 \$122,934 Quebec, Ontario, etc............ 1890-1 201,961 430,335

$$
\text { Total....................... } \quad \text { 260,6,48 }
$$

Nowa Scotia, New Brinsw'k, etc. 1891-2 77.963 \$162,794
Quebec, Ontario, etc............ 1891-2 285,035 569,266

| Total.................... $\quad \overline{362,998} \overline{\$ 732,060}$ |
| :--- |
| Nowa Scotia, New Brinsw'k, etc. 1892-3 |
| 88,739 |
| $\$ 169,124$ |

$\begin{array}{lllll}\text { Nowa Scotia, New Briswk, ctc. } & 1822-3 & 78,739 & \$ 169,124 \\ \text { Quebec, Ontario, etc............ } & 1892-3 & 379,970 & 746,358\end{array}$
Total.
458,709 \$915,482
Nova Scotia, New Br'nsw'k, etc. 1893-4 $\overline{58,057} \$ 115,623$
Quebec, Ontario, etc............. is93-4 320,4'5 6i6,ioi
Total..................... $\quad \overline{378,472}$ \$731,724
Nova Scotia, New Brinswh, etc. 1894-5 9,640 \$20,174

Totai..................... $\quad$ 51,513 \$99,790
All sources.................... $1805 \cdot 6 \quad \overline{578,870} \$ 1,100,223$

$$
\begin{aligned}
& \text { importation of canadian tinaber (not round.) } \\
& \text { Average } \\
& \text { Yearly } \\
& \begin{array}{l}
\text { Year ending June } 30,1896 \ldots \ldots . . .8_{27}, 603 \quad 87,603 \\
\text { Three monihs ending Scpt. } 30,1896 \ldots 24,763
\end{array}
\end{aligned}
$$

Three months ending Sept. $30,1896 \ldots 24,763$
Nine months ending Sept. $30,1895 . . .{ }^{6} 6,654$

length, advocating that a duty of $\$ 1.00$ per thousand feet be imposed on rough lumber and timber, and $\$ 2.00$ upon all dressed or re-manufactured lumber. Such a duty would realize a revenue for the government of one million dollars, while it would not be sufficient to shut out much of the Canadian product, but would protect the market from becoming demoralized.

Mr. H. E. Foster, of Washington, referred to the competition trom British Columbia. The manufacturers there had quite an advantage in being able to ship their lumber in foreign ships to American ports, by means of which they were often enabled to get very cheap rates. Canadians had also an advantage with respect to stumpage, as they had no taxes to pay, the land reverting back to the government when cleared.
Several other delegates expressed their views, advocating a duty of not less than $\$ 2.00$ per thousand feet, and the Committee on Permanent Organization reported, recommending the appointment of a ways and means committee to establish such legislation as is considered in the best interests of the jumber trade, also the appointment of a committee on resolutions, to be composed of five members. Mr. C. W. Goodlander, of Pennsylvania, was elected president of the ways and means committee. Other speeches followed, and Mr. W. B. Mershon, of Saginaw, made the the following report for the committee on resolutions:
Whereas, The placing of lumber on the free list by the existing tariff law no: only promotes ruinous competition on lumber from Canadian mills, but discriminates againt lumber as compared with other manufactures. Therefore, be it
Resolved, That this convention representing the entire lumber industry of the United States in all lines, respectfully petition congress to place lumber on the dutiable list. And be it further
Resolved, That each lumber deater in the United States be urged to furnish to the senators of his state, and to the member of congress from his district, full information in relation to the needs and condition of the lumber industry, to the end that they can consistently assist in the passage of this measure. Finally
Resolved, That this convention recognizes the fact the unjust discrimination prevails in some countries in South America and elsewhere, as against American lumber, and that we are entirely opposed to such unjust discrimination, and we invoke the aid of the United States congress for the purpose of removing the same, either by reciprocity or otherwise.
Mr. G. W. Hotchkiss, of Chicago, gave an animated talk on the value of lumber and the effect of importations. He had commenced his lumber business in Canada, buying common lumber for $\$ 3.00$, fourths for $\$ 7.00$, and the three uppers for $\$ 14.00$. This was about forty years ago.
The chairman made a few remarks and ad journment was announced, after which a meeting of the Ways and Mieans Committee was held. In the evening a banquet was tendered the visiting delegates.

## WELL PLEASED.

Mr. D. P. Sicklesteel, McGregor, Ont., having recenty sold cut his business, requests that The Lumberman be discontinued, and adds: "Am very weil pleased with The lomberman, and would continue to take it had Ino: sold ont."

## THE LUMBERMAN FILLS THE BILL.

The Napance Pulp and Paper Co., Led., of Fenelos Falls, Ont., write: "It is with pleasure that we hand yo: settlement for our 'ad' in The Canada Lumblrman, 2 the results have been very satisfactory indeed."

## CORRESPONDENCE

Ietters ate murted from our reader on matters of practical and timely

 of co.respxindents.

"ONE LEADER."<br>Bammi:, Ont., Nov. 25th, 1896.

To the liditur of the Canaba I. unabranan:
Dear Sir,-Now that McKinley has been elected, and gold declared to be the leading metal, from every nation and point of compass is heralded the news of general satisfaction and restoration of confidence; resulting already in furnishing employment to over one hundred and fifty thousand of idle artisans. The election has developed that the people only require one metal as a leader-and that is gold. This decision is, 1 believe, in accordance with the original Desigucr from the creation up to the end of time-that there should be only one leader in anything, whether of nations or swcieties, mineral, agricultural, forest, or andy other productonly one leader of its class can successfully exist. And the moment two leaders are given equal power, the seed of discontent is planted, the growth of which will in time be destroyed by its superior. White pine, like gold, is the leader
With gold as a foundation for all obligations, coupled with a permanent advance in mineral lands, wheat and all other agricultural products, a reason is furnished to anticipate an increased demand for the goods supplied by the manufacturer which will set in motion the wheels of commerce, the effect of which cannot be otherwise than beneficial to the lumbering industry. But as to the general revival of trade advancing the price of lumber, say one dollar per $M$ feet mill run, this will largely depend upon the lumbermen themselves and the banks that supply the funds. If the lumbermen produce an excessive quantity in the future, as they have in the past, and then force it upon the market (as many will) -two million feet when only one million is re-quired-then I fail to see that the result in price will follow beyond a moderate advance over dul time prices. With the competition that exists from whitewood, pine timber, flooring, ceiling, box lumber and shingles from the Southern States, and cedar, redwood, Douglas fir and shingles from British Columbia and Washington territory, and the manufacturers of these exercising the same fault of forcingr double the quantity upon the market that is required, the result will be in order-to find their grisin. It would require a one stamp gold mill with latest improvements, also a lightning calculator with a powerful magnifying glass, to discover a small speck of profit-after paying interest, insurance, and depreciation of property and expense of manufacturing, which is the smallest, most econonical and hardest carned of all.

The moment there is a permanent advance in lumber or grain the railroad companies claim they have a "title deed" to it from the Crown, and advance the rate accordingly-they claim it o is fair to allow you to hold the "title deed" to the ground, and they a "deed" to the profits therefrom, as they do not want the earth, only fessults-for which they "draw" to secure.

There is no doubt but that the retail yards in the United States are all carrying small stocks, fint the demand corresponds with the amount of
small stock carried. Now, where is the lumber if not in the retail yard? You will find millicus upon millions at Buffalo, Tonawandi, Chicago and other wholesale yards, and at the mills in Canada, Michigan, Wisconsin and other states, hundreds of millions of '94, '95 and '96 stock, all ready to ship, and millions more to be manufactured, with 1897 cut to follow. The effect of this will be to check the advance in price that should take place.

Canada owns billions of white pine standing timber, and for want of appreciation or realizngg its value an anmual destruction of millions is going on, resulting in a loss to all interested.

I know of only one way to advance the price of lumber to a paying basis, and that is to manufacture no more than the demand requires, but who can stop the "Niagara" or the whirlpool below?

The lumber manufacturers are "in it"-the loss; the railroad companies are "in it"-the profit ; the government are "in it"-destruction of timber.

Yours truly,
C. H. Clatrk.
[The above letter was written for our December number, but was received too late for insertion. - The Editor.]

## THE DUTY QUESTION. <br> Montreal, 25 th Nov., 1896.

To the Fejitor of the Canadn Lumbrrahas:
Dear Sir, -In reply to yours of the roth inst. would say, that although a protectiorist president has been elected in the United States, I cannot believe that the duty on lumber going there will be re-imposed, for the following reasons: The great bulk of the people of the United States being consumers, their interests will be considered rather than that of a few lumbermen who represent but a small portion of the people and who have really a monopoly of the business, as the principal part of the timber lands are com paratively in the hands of a few operators who can control the output if they will; but the apparent disposition of most lumbermen is to get rid of, as fast as possible, what standing timber there is left and let the future take care of itself. Then the fact of so many Americans being so largely interested in our mills and timber lands, will naturally influence them to oppose any legrislation that will debar them from getting our pulp wood, logs and lumber, which they see the necessity of having to keep their paper mills working, and the refuse of the logs to make their salt. The Titabawassy, the Cass and other rivers that once furnished this material are almost denuded of their pine, and it is doubtful if Michigran, which once made four thousand million feet of lumber in a single year, produces half that quantity at present, even though it is of a very inferior quality. There is still some good timber in Michigan, but it is in very few hands.

Last year there was taken across the Georgian Bay and Lake Huron to that state some three hundred million feet of pine logs to keep their pans and mills going. Saginaw, Alpena, Musk: , n.. Grand Haven, and other centres of the great umber industry, will, if something else does not turn up, be piaces of the past. Then, again, if our American friends should revert to the import duty on our lumber, we would, of
necessity, reimpose the export duty on logs and pulp wood going to the States, resulting in what I think would be contrary to the interests of both countrics.
In reference to the outlook for the coming year's business, I think it is good. The American market during the past year has been very quiet, while the English trade has been good, most every kind of lumber being in demand, particularly waney board timber and spruce deals Had it not been for the high rates of freighe prevailing in the fall, much more of the latter would have gone forward; in fact, had it not been for the British market the past season, many of our lumbermen would have run their mills on short time. The outlook for next year's business is promising, the cut of deals being all sold.

## Yours truly,

J. K. Ward.

INFORMATION WANTED.
Scotstown, P. Q., Dec. 16th, 1896
To the Fiditor of the Canada Luabrbaian :
Sir, -I wish to transmit about eight horse power a distance of about 1,500 feet from a water wheel, which I can do by using an electric motor, but that is expensive.
I have been thinking that I could connect an air compressor directly to the water wheel and carry the air in steam pipes to the place where the power is required, and use an ordinary steam engine. There is only one difficulty I see in the way, that is, to keep the engine from heating. Perhaps some of your readers have had experience with this kind of power, and can give me some light on the subject through the columns of The Lumberman.

Yours truly,
C. H. Parker.
[It is perfectly feasible to transmit the power by means of a compressor and a steam engine as you propose. There is no difficulty about the heating. The cylinder of course would need oiling, but the principal difficulty that has been found has not been the heating but the cooling, as the air expands when released from the engine and usually produces frost. The method of transmission by compressed air has a good deal to be said in its favor, but in this individurl case we are of the opinion that the cost of the apparatus, namely, the compessor and the engine, would be considerably more than the cost of the electric outfit. - Ed. Lumberaian.]

## KEEP ON ADVERTISING.

No business man not yet dead in the shell but can see even in dull times an opportunity to let the world know that he is alive. In advertisitog one's business it is perhaps three times out:of four a blind and fatal mistake to leave the public in the dark as to whether the factory is still running and the owner thereof alive or dead. No industry that is not overdone or wrongly located can be effectually downed by a spell of depression. Consumers do not quit the world as some gentler. en did in the days of Noah, and if unable to purchase what they need to-day, the same need speaks for itself to-morrow. When the wind is low, mend your sails, and the man who is prepared for the breeze is the man most benefitted by the same.-Power and Transmission.


MONTHLY AND WEEKLY EDITIONS
C. H. MORTIMER

Confedmration lifh Builining, Toronto Mrancil Opticr:
Nibw York Lifr Insurancr Building, Montrbal.
The Luspgratan Weekly Edition is published every Wednesday; and the Monthly Edition on the ist day of every inonth.

TERMS OF SUBSCRIPTION:
Ono Copy, Weekly anc Konthly, One Year, in advance....... \$1.00 One Copy, Weckly and Montbly, Six Months, in advance.... $\$ 1 . \infty$ Foreign Subscriptions, $\$ 2 . \infty 0$ a Year.
Advrrtising Ratbs Furnished on Apilicazion ZTue Canada lumingrasan is published in the interests of the lumixe Tracle and of allied industries throughous the Dominion, being the only recountr:. It aims at giving full and timely information on all subjects touching these interests, discussing these topice editorially and inviting
free discusion by others, Especial pains are take
ket quotationsis from larious poinis thwughout the wortid, so as to afford to ket quotatioss form harious poinis thruughout the world, so as to attore
the trad in Canada information on which it can rely in its operations Speciat correspondents in localaties of importance present an accurate
report :ict only of prices and the condition of the markes, but also of other reportits only of preces and the condition or the morkes, but also of other only welcome, but is invited from all who have any information io communicate or subjects to discuss relating to the trade or in any' way affecting
it. Even when we may not be able to agree with the writers we will give the Enen when we may not be abe tis opportunity for free dicusion as the best means of eliciting then a fair opportunity for free discussericularly zequested, for even if not of Ereat imporance individually they contribute to a fund of information from which general resulss are obtained.
Advertisers will receive careful altention and liberal treatment. We
need not point out that for many the Canada Luaberans, with its spe-
 publicity, but is indispensable for those who would bring themselves before The notice of that chask Special attention is dinected io "Wanthd" and
"FOR Sals" advertisements, which will be inserted in a conspicuous position it the uniform price of is cents per line for each insertion. Announce sents of this character will be subject to a discousat of as per cent. it ordered for four successive issues or longer.
azrasan quito insignificant as compared with its value to them. There is azron an individual in the trade, or specially interested in it, wino should not ive on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

## TO VIBItING LUMBEBMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUABERMAN as tholr olun. We shall take pleasure in supplying them with every conveniencs for recsiving and answering theif corrsspondence, and hold ourgelves at their eervice in any other way they may desire.
1897.

Standing on the threshold of a new year, the portals of which are about to swing open to us, we cordially extend to readers of The Lumberman the wish that 1897 may bring to them in satisfying measure happiness and prosperity. There's no denying the fact that business conditions have not been to our liking for several years past. In consequence most of us have thought that we had good cause to grumble, and have, perhaps, exercised our prerogative a little too freely. Our grumbling has not improved matters-on the contrary it has probably been a more or less potent influence in the other direction. On the principle that misery loves company, we have had the satisfaction of knowing that our neighbors across the border were being pinched harder than ourselves.
In spite of hard times, however, our exports of lumber and timber products of various kinds were considerably in excess of any previous year. So far as the United Siates market was concerned prices ruled very low, but European transactions brought satisfactory profits.
Speaking generally it can be said that the outlook for the new year is an encouraging one. A feeling of hopefulness, which las been lacking
for several years past, now pervades the business community. This of itself nust exert a powerful is.?uence in setting the wheels of enterprise in swifter motion, creating a demand for lumber and other lines of material. The satisfactory price which has been reached and is being maintained tor wheat is a mighty factor in bringing aiout good times in an agricultural country like Canada, and affords a solid basis upon which business men may build their hopes.

The Cinada Lumberman would like to see every lumberman as well as business man in every line, put a cheerful courage on, get his shoulder against the wheel of the car of progress and assist to give it a momentum that shall continue throughout this and many future years.

The attention of our readers is called to two new features which appear for the first time in this number of The Lumberman, viz., a department for Retail Lumbermen, and a Wood Pulp Department.

The retail lumber trade of Canada is deemed to be sufficiently important to warrant us in giving it in future a greater amount of attention in these pages that it has heretofore received. We hope to have the encouragement and assistance of the retail lumber merchants throughout Canada in the effort we shall make to impart interest to this new feature of the paper.

The wood pulp department has been established owing to the close relationship existing between the lumbering and pulp manufacturing industries-many of our lumbermen being owners of pulp wood limits as well as investors in pulp mills. The relationship thus existing between these industries should render this department of interest to both lumbermen and pulp manufacturers.

## OUR RELATIONS WITH THE UNITED STATES.

Following the election of Major McKinley to the Presidency, the lumber manufacturers of the United States, particularly those of the Southern States, are reviving the agitation for the re-imposition of a duty on Canadian lumber. We print elsewhere an account of a recent meeting held at Cincinnati to discuss this question. The enterprising publishers of the Chicago lumber journals and other gentlemen delivered eloquent speeches in which the woes of the American manufacturer were skiffully painted in becomingly sombre hues. It is not the usual custom of our American friends to attach much importance to Canada. They are accustomed to say; when Canada is mentioned, "Canaday-where is Canaday, anyhow?" It is rather amusing, therefore, to see the representatives of the greatest American industry appealing to their government to save them from destruction at the hands of the Canadians. Candidly, we think our American friends are acting on this occasion in a manner altogether inconsistent with their usual practice, and are making much ado about nothing.

Purposely, no doubt, they present to their government but one view of the situation, and that the one most favorable to themselves. They admit that the lumber imported from Canada constitutes only about one-sixth of the total amount placed each year on the American market-or in other words, about two-thirds of the total yearly receipts of lumber at the city of Chicago alone. It is a well-known fact that a
considerable part of the lumber imported from Canada, is exported by the American buyer to his foreign customers and therefore does not come into competition in the home market with the product of American milis. We presume that should an import duty be imposed, there would be a rebate of duty on such lumber as could be shown to have been bought for and exported to foreign markets. There would also be a rebate granted to box manufacturers on all lumber brought in from Canada for use in their business. Deducting the total amount of such rebates, the revenue which the American government would derive from a moderate duty would be trifling indeed, and the benefit which would be likely to accrue to the American lumber manufacturer from shutting out say 25 per cent. of the Canadian exports, would be correspondingly small.

The American government should and doubtlass will consider whether it is worth while to disturb the present trade relations of the two countries-the advantages of which are recip-rocal-for the purpose of conferring a trifling advantage upon a particular class, largely at the inconvenience and expense of the consumers, who, in point of numbers, are as 100 is to 1 . The advantages of tiie present arrangement are, as already stated, reciprocal-notwithstanding the efforts of the speakers at Cincinnati to make it appear that Canada gets all the benefits. In exchange for the free admission of our lumber to the American market the owners of the largest mills in Michigan and Wisconsin are permitted to export from Canada, free of duty, the timber necessary to keep their business in operation. Were this privilege to be withdrawn, these extensive mills would be obliged to close down, the capital invested in them would be to a large extent destroyed, thousands of workmen would be permanently deprived of employment, and cities like Saginaw and Bay City, which are dependent upon lumber manufacturing, would be ruined.
Again, under the present arrangement the owners of pulp mills in New England are allow. ed to carry immense quantities of pulp wood out of New Brunswick each year free of duty. The withdrawal of this privilege would certainly entail inconvenience and loss upon the owners of these mills, and in many instances, no doubt, would lead to the removal of American pulp mills to Canada. Our American friends should endeavor to take a broader view of this question, in which case they should be able to see that it has many bearings, and that the interests of both countries would probably be best conserved by leaving the tariff unchanged. Taking into consideration the fact that the principle at stake in the late Presidential election was that of a sound as against a debased currency, and that the President elect received substantial support from a strong section of the Democratic party, the probability of the protectionists being able to carry such a measure as the American lumber manufacturers desire is at least doubtful. In this connection we desire to express our satisfaction with the proposal that has recently been made that the Canadian government should arrange to have a permanent representative of the Dominion at Washington to facilitate negotiations and promote satisfactory relations between the United States and this country.

## EDITORIAL NOTES.

Tub Board of General Appraisers at Washington have just rendered a decision in the important question of the valuation of wood pulp, by which is determined the amount of duty to be paid by Canadian manufacturers shipping to the United States. Heretofore the Government valuation has been $\$ 12$ per ton, tut at the suggestion of Treasury Agents Wood, of Detroit, and Stokes, of Plattsburg, N. Y., an appraisement was made, the decision being that the valuation should be placed at $\$ 11$ at the point of manufacture.
The Mississippi Valley Lumberman's Association has announced an exposition of lumber grades to be held in Minneapolis this month. It is intended as a means by which manufacturers, wholesalers and retailers may inspect and become acquainted with the standard grades, and as such it should prove of great interest. There will be exhibited in a suitatle building, provided for the purpose, from 75,000 to 100,000 feet of lumber. Canadian lumbermen will learn with surprise of the attention given to the question of grading by this association.
A strong argument in favor of holding firmly to prices is found in the published statement that the manufacturers of red cedar shingles have so reduced prices as to make their product unpopular in the eastern markets. Following the reduction in price, an attempt is said to have been made to produce the shingles at a less cost, and consequently the quality has deteriorated and the product become unpopular. Owing to the lack of anything like a standard grade or price, dealers also feel a delicacy about making purchases, lest their neighbors should undersell them. To retain the eastern trade the manufacturers of red cedar shingles must study the market more closely.

One of the essential features in the production of a first-class trade journal is that it should contain the views of those in whose interest it is published. When important questions are under consideration, readers naturally look for the opinion of others engaged in the same line of industry. During the past year the Cavada Lumberman has received contributions from a number of its subscribers, to whom we are deeply grateful. In the year 1897 it is hoped that many more will assist in increasing the value of the Lumberman by expressing their views on subjects relating to the lumber trade, as well as by seeking information through its columns. The publisher is always pleased to hear from subscribers. Let one of your New Year resolutions be that you will write more frequently to your trade paper.

Mention was made in these columns a few months ago of the fact that the vessel in which Dr. Nansen attempted to discover the north pole was made of Douglas fir, and that it had been subjected to great pressure among the ice floes. Further corroboration of the strength of the vessel is given by Dr. Nansen, who states that when the pressure was at its height, her beams and timbers began to crack; she broke loose and was slowly lifted up out of the icy berth in which she had been fast frozen, but they were unable to find a single crack or a splinter displaced. This proves the immense strength and
clasticity of the Douglas fir. In this comection we note that expert testimony before the Behring Sea Commission at Victoria, B. C., affirmed the fact that Douglas fir was far superior for purposes of shipbuilding to Oregon pine, the only article of lumber that is in any way to be compared to the product of British Columbia.

Tus subject of business courtesy is one to which greater attention and study might profitably be given in this and other countries. The indifference and lack of courtesy shown to representatives of business houses by those holding responsible positions is often such as to cause astonishment, and the person who has sought an interview is made to feel that he is regarded as an intruder. An instance of this was recently brought to our notice. A representative of a European house called upon a prominent manufacturing firm in Ontario and was treated with such indifference as to be at a loss to understand the situation. He afterwards expressed the opinion, in which we entirely concur, that such an attitude was not only injurious to the particular industry with which the firm in question were identified, but to the country at large. Particularly in a young country such as Canada, the aim of every business man should be to establish our reputation as a courteous and hospitable people, always willing to extend the hand of friendship to visitors from abroad. Thus Canada will be looked upon as a desirable country in which to reside, and the increased population which is so necessary to our welfare will be altracted to us. It costs nothing to treat your fellow-beings civilly, and the results are invariably profitable.

## ENGLISH TERMS AND MEASUREMENTS.

Below will be found some particulars regarding English terms and measurements as furnished to us by one thacroughly acquainted with the English trade which will assist our readers to a better understanding of the English market. In the article which we reproduced last month from the Tradesman there are said to be several inaccuracies.

Lumber in Great Britain is spoken of as timber, the only exception to this rule being in the case of hardwood lumber imported from the United States, which is spoken of as States lumber.

The term yellow pine in England is synonymous with the white pine of Canada, while the yellow pine of the Southern States is dasignated pitch pine.

Round timber in England has formerly been measured to find the cubical contents by the quarter girth by what is called the "Hoppus' system," in which the devisor is 144, but of late years it has been discovered that this devisor gives 27 per cent. less than the actual contents when used for measuring round timber. The Customs Find Timber Measuring Department now measure round timber by the quarter girth and use the 113 devisor, but if the timber is measured by calliper, or by the diameter, the devisor used is 183 , which gives the true content.
Sawn timber, such as deals, battens and boards, or "lumber," as it is called in Canada, is imported by the St. Petersburg standard hundred. The standard St. Petersburg deal is

12 feet in length by $11 / 2 \times 11$ incles. The standard contains 120 pieces, or 6 score to the hundred, which is equal to 1,980 feet of 1 inch boards. To this measurement every size and dimension has to be reduced. In London and Ireland, however, there is another standard which is used principally for retail transactions, and which is 120 pieces 12 feet by $3 \times 9$ inches, equal to $\mathbf{3 , 2 4 0}$ feet board measure.

Planed or dressed wood, such as flooring and matched boards, are imported by the St. P'etersburg standard, but are re-sold in England by the square of 100 superficial feet.
Another measurement in England is the fathom, which is 6 feet cube, or 216 cubic feet. Lath wood, deal and batten ends, or as it is called in England, "firewood," is bought and sold by this measurement. Mouldings are sold by the 100 running feet.

Square timber is sold in the English market by the load of 50 cubic feet, equal to 600 feet inch board measure. The railway companies carry so cubic feet of fir timber to the ton, and 40 cubic feet of hardwood timber. Mahogany, cedar and furniture and fancy woods are sold in the $\log$ or in plank at per superficial foot of one inch thick. Hardwood boards or States lumber is now sold in considerable quantities to English merchants by the car load.

## BAND VS. CIRCULAR.

A short time ago I asked for a discussion on the difference between the saw kert of a circular and that of the band satw, or the gain of the band over the circular in amount and profit, writes A. Blackmer in the Wcod-Worker.
By allowing a difference of one-cighth of an inch between the circular and band-that is, calling the circular $x^{-16}$ incies for the board and kerf, and the band ${ }^{1} 3-16$ inches for the same-1 find that the band will make 21 boards out of the same timber that the circular will make ig boards from, making a difference of $\mathbf{2 - 1 9}$ in favor of the band; 2-19 of a day's run of 60,000 feet makes 6,315 feet, which at a moderate estimate of $\$ 10$ per thousand, is worth $\$ 63.15$, so that if there were no other items to consider, the band would have paid for itself in a very short time.
However, there are several other points to consider. In the first place, when the band averages 50,000 a day it is doing well, and so the sawing of this extra 10,000 a day which would be necessary to make its day's work equal to the circular in amount, at $\$ 2.50$ per thousand equals $\$ 25$, which must be charged to the band, and when taken from the $\$ 63.15$ that it now has credit for leaves a balance of $\$ 38.15$.
As a further offset, when there is a change to be made from a circular to a band, is the expense of making this clange, including the enlarging of the filing room and new outfit for the same, and interest on the investment.
To recapitulate: The difference in saw kerf on which these estimates are based is probably not far out of the way. It is probably in each case about a $3^{2 n d}$ of an inch more than the majority carry, but that does not materially change the result. It costs much more to keep a supply of band saws on hand and keep them in order than circulars. Just how to estimate some of these things is a little difficult without a demonstration by an actual account being kept.


A WORD TO THE RETALLER.
In this country there are two classes of retail dealers, the one conducting a strictly retail yard, and the other having in connection with his retail business a wood-working factory, by means of which he supplies dressed stock, sash, doors, etc., to his customers. This fact has suggested the change which has been made in the heading of this department, and while in the future the same attention will be paid to the wood-worker as in the past, it is hoped to present, also, articles of interest to the dealer conducting exclusively a retail trade.

Many millions of feet of lumber are consumed annually in building operations in Canada, a large portion of which passes through the hands of retail dealers, to whom manufacturers and wholesalers look for much of their Canadian trade. A close affinity, therefore, should exist between the manufacturer, the wholesaler and the retail dealer, and each should strive to promote the interests of the trade in general, by according to cach branch its rights. To make this department beneficial in advancing the interests of the retail dealer is one of the objects desired, and to attain this the assistance of every dealer throughout the country is solicited. Ccantributions on any subject of interest to the trade, whether local or general, and discussion on the methods of executing work in the planing mill, are invited. This is the Retailer's Department, and we trust the retailer will assist us to make it of the greatest possible service.

## SUGGESTIONS FOR IMPROVEMENT.

While the lack of organization in the lumber trade of the Dominion is strikingly manifest by comparison with other countries, it is creditable to the retail trade that the only associ ition which can fairly be said to be in active or. ation is the Western Retail Lumbermen's a sociation of Manitcha. Nearly every retail 4 aler of the Northwest has his name enrolled on the membership list, which also includes the manufacturers as honorary members, thus assisting in a better carrying out of the objects sought. Since the inception of the association dealers have been enabled to maintain fair prices. While cutting has been avoided, the consumers have not been called upon to pay exorbitant figures. There is certainly much to be said for and against the perpetuation of combines. There always has been, and perhaps always will be, strong opposition to their existence, but any arrangement that will secure to the manufacturer a reasonable return for money invested, and prevent him from sinking into bankruptcy, bringing loss to the community in which he resides. must, we think, be looked upon as serving a desirable purpose.

This the Western Retail Lumbermen's Associatien are striving to do, and what can be done in one section of country can be done in another. It might not be perfectly feasible for the retail dealers of Eastern Canada to organize on their own account, but they might become a branch of a manufacturers' association if such existed, and work in harmony therewith. In the United States there are a number of retail associations, which have proven to be of great assistance in maintaining the trade on a profitable basis.

The lot of the retail dealer in many parts of Canada has not been a happy one during the late period of depression. In British Columbia his condition has been improved by mining operations, and in the Northwest the advance in the price of wheat has had the effect of creating considerable trade, but in Ontario and Quebec less favorable conditions have prevailed. Upon the building trade largely depends the business of the retail lumber dealer, and unfortunately, the two largest cities, Toronto and Montreal, have just passed through a period of severe depression. Dropping into the office of a retail dealer in Toronto, the writer inquired how the past year's business had compared with 1895, and was told by the proprietor that he had adopted the policy of selling for cash only, and this, of course, had restricted his trade, but until the books were balanced for the year he could not say just how he would stand. He said, however, that the past few years had been a period of enduring expectation, and they were just hanging on awaiting the return of better times. The wisdom of conducting a cash business is not to be doubted, although it is sometimes very difficult to do. Bad detts are the bane of many an otherwise promising tusiness, and liberal credit opens the door to the unscrupulous contractor to evade payment for his goods. The refusal of credit to builders would have a tendency to weed out the weak contractors, and thus place the retail lumber trade on a stronger footing.

## CONDITIONS NECESSARY TO SUCCESS.

For a long time the planing mill business has been one of very close competition, for which state of things mill owners have only themselves to thank. A great percentage of them are troubled to-day to know how to make ends meet on the last day of 1896 .
The proprietor or manager who always comes in an hour or two late, sits down, puts his highlypolished boots up on the desk, there to remain until he has posted himself fully on horse racing and base ball matters, and smoked his cigar, leaving his correspondence and business-that should receive his first atteation-till the cigar
and sporting news are fully digested, is nearly always in trouble, as well as those who wait daily in their ofices for the clouds to roll by, never making an effort to look up a job, and only getting what tails on theirplates without any efforts on their part. If work is to be had you must hustle around and get it. If you don't get a car load get half a car lond; hustle around and get your share of what is to be had.
The owner or manager should be at his place of business the first one in the morning and arrange business for the day. See that your foremen have everything properly arranged for the day's work, making necessary suggestions and having a good understanding about the work. Nothing pays better than this "entente cordiale." It makes things work smoothly-like riding along in a nicely-oiled carriage instead of one that squeaks and squeals all the day through. The proprietor should not only be there first, but should remain till the last and see what has been done and what left undone; often what has been left undone is of more importance than that which has been done.
Because you are proprietor or manager is just the reason why you should be right around amorg the men and machines, especially in close times like the present. It is necessary at all times to keep an eye on the material that comes into the mill. See what it is and how it is handled. It is wrong in principle to go along from year to year in an old beaten way that you have always been used to. You must from time to time look into new ways of doing things and see if there is not a better, cheaper and quicker way to do work.
It is not always machines that need improving. There is often as much saved in handling stock as the percentage of profit you hope to make on it. One concern may underbid another and make a good margin of profit just from a better and easier way of handling the stock. This stock handling is a stumbling block in the way of many an otherwise enterprising business concern.
You go to a mill and see men passing up one board at a time through a scuttle, that thing being repeated every day. It doesn't need a demonstration to show they are liable to have hard times there. They are slow coaches. Get some kind of a litt over that hatch, if it is only a simple hatch over a drum ; hitch steam to it :and instead of putting up one board send up a thousand feet. I see every day men carrying one board at a time from scows on to a wharf, and if the stuff is heavy, two, three and sometimes four men to a plank or stick of timber. Away up the wharf they go with it about as they would go to a funeral. Not that the men don't work hard eno:gh. We all know it's hard enough to carry this stock up the wharf, and it's slow enough too. There needs to be some enterprise and some go-ahead; instead of one piece at a time going ashore, a steam crane should put a thousand feet ashore and a travel. ing crane or car carry it up the dock. Does any one wonder that this concern is in the hands of a receiver?

Numbers of owners and managers think it is beneath their dignity to get out and dig into their work, preferring to entrust it to some kind of a fureman. Business is business, and if you
are going to make anything out of it, you must get into it with your whole life and soul. No business ever succeeds if handled with the tips of one's fingers. Everything must be made to count on the profit side, even if it is only on a small margin.

Not a great while ago our miil figured on a job of 200,000 fect of $3 \times 12$ planks, but lost it by fifty cents a thousand. The firm that got the work failed before the stock could be delivered and we got the job at our own price. This was the method of the concern that figured against us, and as it is always the last ounce that breaks the camel's back, this little job tipped them over. You can not figure too closely on work where you have a solid half dozen figuring arainst you, ind when you get the work you n - go in to win. Every available point must be taken advantage of ; not the least item must be lost in handling. Keep it moving, so the machine need not wait for it one minute; keep the machines drawing it through. Here's another place where a great many lose money-taking away from the machines and loading. If the order is a local one, of course in most cases you expect to lay it down so teams can haul it away, but if it is 10 be loaded on cars or on board a vessel, there should be no waiting. Keep it moving along out of the way, by power it possible. Study up some plar. by which you will be able to move it quickly and easily. Machine work counts, especially on heavy jobs. Where you want to load a car every thee hours you must figure close on the minutes. Ten mirutes lost here and ten minutes lost there, soon count up into hours; the hours and mmutes lost can never be recovered.

To run things closely does not mean that it is advisable to rush. The rusher more often than otherwise loses his head and either has a break$\because$ down or makes a mistake and has to do part of his work over again, which hinders instead of hurrying the work on hand. It is a steady, strong, continuous pull that pushes work alc.ug; every man at his place and doing his earnest, honest best. There are times when we must carry sail to keep off a lee shore, and with the hundreds to-day who are carrying heavy sail, let me say, keep things close. One wrong move may tip you over. Every minute must count.

Recent political events lead us to hope for better times. Whether we get them or not the principle is the same. Our business is never boys' play and always needs constant care and close attention.-Jonathan Torrey, in the Wood--Worker.

## REDUCING VALVES FOR STEAM HEATING.

A great deal of steam is lost by estaping through the valves, which conduct it to the various points in use in the mill, when not needed, due either to the valves being carelessly left partly open or to a disordered state of the yalves, whereby they leak when closed. This occasions a waste of steam. The waste of steam in a heating system for the mill is almost protierbial. In steaming stock there is waste.
 Teaving the steam on. If more steam is used
 ind escapes with the vapor. Steam at five or登en pounds pressure is for nearly every purpose
as good for heating as steam having the full boiler pressure, provided in cases of leating liquids or boiling the supply pipes are made of sufficient area to transfer the low pressure steam; and provided in cases of heating by pipes and other surfaces the area employed is enough larger than it would be if high-pressure steam was used to provide for the reduced difference of temperature. We have frequently seen instances where the quantity of steam used for heating was largely reduced by simply closing down the main valve at the boiler which supplied the heating steam, so as to shut away from the heating apparatus the full boiler pressure, and this result is brought about by reducing the quantity of steam which before was used carelessly. Something can be done, however, in preventing unnecessary waste of steam generally by introducing between the boiler and the main supply pipe a reducing valve capable of easy adjustment, so that the pressure of the boilers can be held back from the system of pipes and valves in question. The main lines of supply pipe are naturally made of sufficient size to carry all the steam that may be needed. The reducing valve is an essential factor in this connection, but we present herewith a home-made contrivance which any man can make a d adopt. It has saved us much steam, as it is self-governing and allows only a uniform quantity of steam to pass. The steam enters at $A$ and goes out at $B$. Fasten an extra shaft $C$ to the valve and arrange it to be turned by the gearing on shaft $D$, as shown in illustration. Then cut a hole in the pipe and insert the tube I. This tube is fitted with a plunger $K$, so that the higher the pressure of the steam the further down will it go, carrying tite cord M with it; and as the cord goes over the groove in the pulley $H$, the latter is turned, and in turning of course revolves the gears E , thus closing the valve. When the steam pressure runs low, a spring on the plunger causes the latter to move upward, and a weight on the other end of the cord makes the latter act the

reverse upon the gearing and open the valve, thus admitting more steam. With such a device steam of much lower pressure will easily find its way to the point of use, and answer all purposes. So long as the presswis beyond the valves is high enough to do the work required of the steam, everything is obtained which could be wished. Variations in the adjustment of the valve will supply increased pressure, which, from time to time, may be called for. If the pressure is by this means kept down to the lowest point which will suffice to do the work, unnecessary use of
steam through the carelessly-lett-open or leaking valves will be avoided. The reduction of pressure in this way will often secure a noticeable economy in the use of steam in a mil! or where live steam is employed for any wors. -B. F. Fells, in Hardwond Record.

## CUT-OFF SAW.

Tus accompanying drawings show a double cut-off saw that is getting quite popular throughout Canada in small wood-working establishments. It is described by Mr. W. Welch as one that can be made cheaply by any machine shop. It is very easy to set for different lengths of stock, from a few inches to as many feet as the machine will take in. It is used mostly to take in stock $61 / 2 \times 21 / 2$ fect.

Fig. : shows end view. The carriage I, Fig.

$x$, is made of wood with V run-ways screwed on bottom. The legs and cross-piece are also niade of wood. Fig. 2 shows front view. To set to different lengths of stock, loosen set-screw $A$, Fig. 2, and turn hand-wheel B, then move rest C, Fig. 2, up to saw.

Fig. 3 shows end view of attachment for moving saw back and forward. D, Fig. 3, is gear wheel to run in teeth as shown at E, Fig. 2. F, Fig. 3, is hand-wheel, and G is set-screw to hold attachment in place after the saw is set. $H$, Fig. 4, shows saw mandrel with double nuts at each end to fasten saw on and take up wear of boxing. Fig. 5 shows shaft with groove cut in for key in mandrel to slide in.

A patent has been granted to T. H. Madgett and William Crawford, of Burk's Falls, Ont., for a wood-working machine.

In the district of Semenovsk, where wooden spoons chiefly come from, about 7,000 men make a living at the trade. The spoons are generally made from birch wood, and a skilful workman can turn out several hundred a day. No fewer than $12,000,000$ spoons are manufactured during the course of tive year, which are sold at six to cight roubles per thousand.

## \} <br> WOOD PULP mo <br> O~ DEPARTMENT

THE MANUFACTURE OF PULP IN CANADA.
Viewen from almost any standpoint, there appears to be a promising future for the pulp industry in Canada. The development during the past ten years, in the face of an import duty of ten per cent. imposed by the United States grovernment on the manufactured article, has been such as to cause capitalists to look with favor upon that industry as a profitable field for investment, and the number of new mills now in course of erection, or contemplated, is evidence of its growing importance. An abundance of raw material, valuable water powers, efficient labor at an average cost-these advantages place Canada in a position to coripete with any other country in the world in the supply and manufacture of pulp and paper.

At the present time there is a strong agitation in favor of imposing an export duty on spruce wood, which provides the main supply for the pulp mills. Such action on the part of the Canadian government would probably be followed by retaliatory measures by the United States government, and instead of the duty on pulp going to that country being ten per cent. of the value, as at present, it would likely be advanced to such a point as to practically close the United States market to Canadian pulp manufacturers. The effect of this would be, we believe, to stimulate the manufacture of paper in Cimada, as well as cause manufacturers of pulp to seek new markets.

Our foreign exports of pulp already total up to a considerable sum anmually, and information to hand proves that the industry is capable of much greater development. Denmark is now turning her attention to Canada for a supply of pulp wood, aitd if the raw material can be profitably exported to that country, there is no reason why the manufactured article should not find a market there, unless tariff duties should prevent. It is also learned that there has been a decided increase in the cust of logs in Norway and Sweden, which coumtries bave hitherto furnislied a large portion of the European supply, and as a result the price of pulp wond to Englich paper manufacturers has been increased. Thus a wide market would seem to be opening for the Canadian product, as no raw material suitable for the manufacture of paper is found in Great Britain.

The establishment of new mills will not, perhaps, meet with the approval of the proprietors of existing concerns, who may tear the effects of competition, but taking a broader vicw, and attaching due importance to the prescint vutuok for an increased foreign irade, the demand would seem to warrant a considerable increase of production.

One drawback to the inanutacture of pulp for export is said to be the excessite freight rates. On the highway of water communication through rates to the seaboard are equitable, but there is a lack of facilities for shipping cheaply from inland points. W'ith the srowth of the industry this will no doubt be remedied.

## PULP AND PAPER.

Ir is estimated that 3,000 to 4,000 cords of pulp wood a day enters into the manufacture of paper in the United States. At the mininum, 3,000 cords, the total for a year would be the enormous amolint of 900,000 cords. It is safe to call it $1,0,0,000$. If this wood were piled in one continuous string, it would make a wall four feet wide and four feet high a little over 1,515 miles in length. It can be seen what a prodigious thing the wood pulp industry is, and at what a tremendous rate it is devouring trees, mainly spruce. Yet all this wood is converted into paper, which, after being used, vanishes from sight in a few days, and goes back to dust, out of which element the trees grow. The pulp business of this country is only a "patchin" to what the world can show. One mill in Paris annually imports about 50 ship loads of pulp wood from Norway and Sweden, and on the east coast of Great Britain and Scotiand large quantities are imported every year. T e mills of this country export a large portion of their output. During the week ending November 18, pulp and paper to the amount of $\$_{3} 0,000$ worth was shipped foreign from New York. Of the total \$10,000 worth went to Melbourne, Australia, $S_{4,725}$ to Mexican ports, $\$ 2,160$ to London, $\$_{2,715}$ to Liverpool, $\$_{500}$ to Manchester, $\$_{3,57} 8$ to Wellington, $\$ 680$ to Buenos Ayres, and about 600 to Hamburg. The exports of paper this year from this country have been greatly in excess of that of any previous year, amounting to $\$ 2,107,700$ against $\$ 1,711,131$ in 1895 . For the month of September the comparative increase was 43 per cent. With this grand start in the business further increase may be looked for in the years to come. Verily the pulp and paper trade is a big thing, and spruce timber is strictly in it slong that line. - Northwestern Lumberman.

## SISSIBOO FALLS PULP COMPANY.

Tue manufacture of pulp in Nova Scotia has grown to be quite an important industry, and one of the largest establishments is that of the Sissibuo Falls Pulp Company, which is located on the Sissibuo, about eisht miles abuve Weymouth Bridge. The company was organized in January, 1 S94, the capital being $\$ 30,000$, held chiefly by American parties, Messrs. F. M. Steadman, the manager, and W. E. Palfrey, of Latrencetown, being the only Nova Scotia shareholders.
The factory is built in the heart of the lumber country, which furnishes an abundance of raw material, which after being manufactured into pulp, is shipped chiefly by rail into Port Gilbert station. The works are operated by water power and lighted by electricity. The machinery is most improved.

The company ouns two hundred acres of wood land ot its own, but this is far from sufficient for the capacity of the mill, and every lumberman around sells his cut. They buy between one and one-half and two million fect each year.

Less than one hour is required for the transformation of a log of spruce wood into pulp. The wood best adapted for the purpose is smooth rounds of six inches diameter. The log is sawn into two foot lengths and has the bark renoved b) relolving serapers. These pieces are then placed in the grinders, which are immense stones
revolving at great speed. The wood is ground against the fibre, hydraulic pressure of 100 pounds to the inch forcing the stick against the stone until the last bit is ground up. It is very essential that these stones, of which there are three, are strong, for the strain is immense. As it courses through the grinder the wood, which is now a pulp, is mixed with water, to counteract the heat of the friction and to act as a tem. porary glue between the particles. It is then pumped up thirty feet into a long trough from which it is taken to the three wet machines. These machines resemble rude printing presses. As the porridge-like pulp passes through these it goes over a sieve which drains out the bulk of the water. The sheets which come out at the other end are then cut up into smaller shects, aud placed in a hydraulic press for a final drainage of water. After leaving here the pulp is bundled into a machine similar to a hay press, and is now ready for shipment in 100 lb . packages. In twenty-four hours 40,000 pounds are manufactured. The output of the mill is sent largely to the American market, the sales being made througi a Boston agent.

## PULP NOTES.

It is stated that the construction of a pulp mill at St . George, N. E3., is under consideration by capiatalists.
It has been decided to erect a pulp mill at Chicoutimi, Que. The shareholders of the electric light compang are the promoters.
Mr. B. Wickett, of Sundridge, Ont., has been engaged to build a pulp mill at Sturgeon Falls, Ont., for Messrs. Heath \& laget.
It is said to be the intention of Messrs. Hamitton \& Ayers, who are building a new dam across the North river at Lachute, Que., to build a large pulp mill.

The South River Mercantile Company of Manitoha have made at contract :o supply $=, 000$ cords of pulp wood to an Ontario mill.
The cut of pulp wood in Mane and New Hampshire this winter will be larger than everbefore. It is estimated that more than half the cut of spruce will be consumed in the mannfacture of pulp.
Twenty-one cars of lumber, paper and pulp were recently shipped in one week by the Royal laper Mills Company, of East Augus, Que. The company have recently receined linelise carloads of paper andahinc.g from Scotland.

Ms. Thomas Allison is said to have commenced an action against the proprictors of the Masterman pulp mill at Chatham, N. B., to recover the sum of $\$ 5,000$ alleged to be due him for services in connection with the construction of the mall and in perfecting the manufacture of pulp. The works are said to have cost $\$ 100,000$.
The American ideat of coneentrating the manufacture of palp and of paper in one establishment is making headway in Germany. The manufacturers of sulphite pulp in that country have not found their industry very profitable during the past year or two, and they have been gradually turning their attention to the manufacture of paper, finding it easer to sell poyjer than it is to sell pulp.
It is said that the Glens Falls Paper Mills on the Hudson Rwer, New York, the largest palp and paper concern in the world, wall in iSyp mahe 2 is tons of finished acenspaper per day. This will require at leavt 475 cords of spruce wood each day, or 142,500 cords in a year, a quantity equivalent to $90,000,000$ feet of spruce logs. More than So per cent. of this spruce is of Canadian productoon, whice the balance is cut in the Adirondacks. At the average of spruce growth in the furesty of Canada or Maine, these mills will consume each year the merchantable product of $2=, 500$ acres ofland. Should Canada impose an export duty on puip wood of $\$ 2$ per cord, it would cost nearly $S_{j 00,000}$ jer annum over jresent cost to supply these paper mills wath the requaite spruce woud from the Dominion.

## OBITUARY．

## mindy herrmann．

Wirlt deep regret the lumber late throughout the United States and Canada learned of the death of Sir． Henry Herrmann，of New York，which occurred at his refidence in that city on Nosember 3 oth，after a short filmens．Deceased was 59 years of age，and on the $12 t 1$ of October last celebrated his 28 th business amniversart． He ranked among the largest lumber deaters in Nen Y．，$k$ ， and was head of one of the mont extensme ertabinabments in the world for the manufacture of special lines of house－ hold furnture，comploying 2,000 hauds．The following phrticulars of ms life，taken from a somenir recent！ issucd，will be read wath meterest，sernagg，as they du，is an excmplification of what may be accompholied by indommable persenerance and a thorough knowledge of a trade：
Born in East Prussat in $1 x_{37}$ ，he was apprenteced to ille trade of cabmet－makmg at the age of fourtern gears． Ho came to America in 1866 ，landing at Nen York，but immediately starting for the went．Retarning to New York a year later，he entered into partnership with a fellow craftsman and rented a small shop on Mott street， manufacturing walnut wardrobes，the combined capital being $\$_{43}$ ，representing the wages of the partners for the preceding week．In two weeks they had doubled their cash．capital，and in six weeks their business had so grown that they were compelled to secure larger quarters． Within six months their business necessitated a further change，and at the end of three years the aggressive young firm was enploying 100 men．In April，1872，Mr． Herrmann＇s partner died．He then branched out，estab－ lishing a lumber station，satw mill and factory at Indian－ apolis．Two yeans later he engaged extensively in the hardwood lumber trade，buying immense tracts of timber lands．Since tiat time be has met with unparalleled success，and at the tinec of his death was the active head of goore than iwenty manufacturing plants making or consuming hardwood lumber，located at various points in the eastern，central and southern portions of the United States，with agencies at London．Eng．，Hamburg，Ger－ many，and Sydney，Australia．Mr．Herrmann was the pioneer in the export hardwood lumber trade to England， which lie first commenced in $\mathrm{I}_{77}$ ，and since that time it has reached the enormous amount of $\$ 10,00,000$ annually． Some idea of the extent of Mr．Herrmann＇s business operations may be gathered from the fact that in one yearbe handled $25,000,000$ feet of black walnut alone． His ordinary slock of hardwoods at various distributing points aggregated more than $20,000,000$ feet．Over one million dollars were annually paid to his employees as wages．The lumber business was exclusively owned by Mr．Herrmann，in whose hands rested the entire manage－ meat．He was a man of extraordinary business qualifica－ tions；and notwithstanding his active career，he had many social friends，and his home life was most pleasant．He was iwice married and leaves a widow and two children．

## bicilifd nagle．

Mr．Ricliard Nagle，a prominent ctizen of Ottawa and one of the besi－known Jumbermen of Eastern Ontario， died 25 Peterboro，Ont．，on November 3oth，after an alness of about a month＇s duration．The late Mr．Nagle was of Irish deseent，having been born in Mitchellstown， sounty of Cork，in i831．He canne to thas country with his amily when nine years of age，and settied in the township of Ramsay，county of Nenfrew．When quite a young nan be took to lumbering，简and was for many years ane of the trusted and expert foremen of the late firm of ${ }_{21}^{3}$＇ohn Egan \＆（o．，being afterwards apponted manager， $\underset{x}{\infty}$ i position whel he occupied for many years．Then he $x$ ievered his connection with the firm and branched out in $\infty$ he lumber business himself．Fis limuts were principally $\infty$ atuated in the lake Aspissing region．His first hamt was $\infty_{\infty}^{\infty}$ he rocky farm near Mautawa，whela he dapposed of to $\infty$ Elock Bros．He purchased many olhers，but sold the najority of them，and retured from acture busmess welie eara ago．Mr．Nagle＇s headquarters iwere int Oltawa， nd for several successive，ycars the took－out square imber and marketed it in 乌ucbec，but it was not in this ne that he made the greateriportion of the considerable ortoso be died possessed of，but in buying and selling －mits，its whels branch of business＂many fortures have uriag the last twenty years been made．In poltics eceated was a staunch Libcral，and occupied a foremost dace 报 the ranks of this party．In 3875 he was the a

Loons，but was defeated，the contest being athree－comer－ ed ouc．He was a man of great matural ability，and it was often remarked that he could talk as fluently in French and Gaelic as an Enghish or lrish．Possersed of a vgorous mond and much perseverance，he gained a leading plate among his fellow citizens．His estate will probably reach $\$ 250,000$ ．

## w．m．Park．

The death of Mr．Wim．l＇ark took plate at Vewerable： N．B．，on the $25^{\text {th }}$ of Nonember．The deceaned came from Scothand to Newcastle when quite young，and for many sears was engaged in the milling and lumber husi－ ness，first as a parther in the firm of Park \＆llexander． and on the death of Mr．Alexander，as a memher of the firm of McLeggan \＆Park．Later he carried on the same business on his own accoumt．A fill jears agn hio gave up the lumber business and confined himself to genetal merchathdise．As a busincss mam his word was his bond，fen men stoul as high in the extimation of the public．He was married to a daughter of the late Alexander Mchaggan．

> how. J. J. Fraser.

On the 2 th of Nowember a cable from Genoa announced the death of Hon．John James Fraser，Q．C．， Lieutenant－Governor of New Brunswick．A few weeks previous he left for Europe in the hope that the clinuate of that country would prove beneficial to his health，which had been failing for some months past．Deceased was born in Nelson，Northumberland county，N．B．，in the year 1829．His father was a native of Scolland，and settled on the Miramichi in 1812，commencing business as a lumber merchant and ship builder．Hon．Mr．Fraser was appointed Licutenant－Governor in 1897：：

## johis fraser．

A fortnight ago the news was receited of the death of Mr．John Fraser，the well－known lumberman of West－ meath，Ont．Mr．Fraser had been ill with cancer for a long time．He was at one time ore of the most promi－ nent lumbermen in the ！Oltawa district，having with his brother，Mr．Alex．Fraser，of Oltawa，engaged in extensive operations．He was highly esteemed by his competitors in the business and was always known for his upright dealings．He was $6 ;$ years of age．

## INSPECTION OF LUMBER CAMPS．

AT the request of Messrs．Gilmour \＆Co．，of Trenton， Ont．，Dr．A．Robertson made an inspection of the lumber camps of the company situated in the townships of Peck， Hunter and Mclachlin，and has reported as follows：
At the mills 1 found a clean bill of health，no sickness whatever．The company have been building a number of comnodious boarding－houses for the accommodation of its employecs，into which they expect to move in a few days．The old camps，which they have occupied since coming here，they intend to tear down as soon as possitle after vacating them．
After inspecting the mill and surroundings， 1 sisited the camps under the jurisdiction of Mr．P．M．Gunter，and found all the men in a very good state of health，there being a few cases of la grippe in the camps，and cases being complicated with a litule sore throat of a follicular tonsilitis character，there being some exudation of pus over the follicies of the tonsil，but nuthing of amembran－ ous character．
There had been，precious to my visit，several cases of sore threat among the men，the majurity of whith， however，recovered in from one to three or four days． The camps under Mr．Gunteris jutisdiction are well builh， being high and well ventilated，while the interior of each is kept in a cleanly conditom，a man being appointed for the express purpose of kecping the camps clean．
At a susable distance from cach shants，water clusets have been crected ont the cesspit plan，and all men are ordered to use them．The waste from the cookery is carned to a suatable distance from the camp before being dumped．
Altogether，the general health was as good as would be expected where so many men from different parts of the country are congregated．
I next visited the camps under Mr．McCaw＇s jurisdie－ tion，and found the camps，with probably une exiception， in much the same condition as I had found the citse of those first wisted．There had been no cause for mento las off work．
The camp in yuestion is an old camp，having been
used the season before，and was not so well wentilated as the others．I gave orders to hate a conuple of ventilators put in the roof over the men＇s slepping apartment，and matruated the furematu to see that all wathe was couried to a suitable distance from the camp before being dumped．

In this camp Ifound the men all in a good state of health，and was informed by the foreman that there had been no cases of siekners in the camp during the time

 casees of sure throat on the limit．
Whatever there may have been in the way of sore throat prentus to my sist，I can tephert that wan there is
 and I ant sathenfied that the precolutivns t．then by the men in charge are all that wan be sequised to prevent an out． break of anything of a contagious character．I might mentive harat an the buardag－huase at the aills，as well as in the camp，I found tice prosision supply of the best， both as co quathits and ywatity，ciery thing nece：sbary to a bealthy diet being supplicd，as well as many of the luxuries．

## ADJUSTMENT OF TOLLS．

A sethement of the dispute between the East River Improtemem Company and the Bremnan Lumber Co．，of Haniton，and the Whatey Iumber Co．，of Huntsville， has been arrived at by the arbitraturs，Messrs．George Kennedy and Theo．C．Taylor，of the Ontario Crown Lands Department．Tre lumber companies held that the Improvement Company were charging excessive tolls， but the basis of settement duarded a higher rate of toll than had hitherto been charged．The case was first argued before Messrs．Kemedy and Taylor，who sub－ mitted their findings in regard to the books，vouchers， etc．，of the East River Company．The total expenditure of the company was calculated at some $\$ 9,100$ ．It was determined to fix the rates of tolls so that the income thas realized would give a revenue of so per cent．on capital invested，would provide for the sinking fund which，cal－ culated at 6 per cent．per anmum，would repay the com－ pany＇s paid－up capital at the end of their 12 years＇lease if invested now，would also pay for the repairs on each section for last year，and would meet as well the expenses of management．

To cover these，the arbitrators decided that the follow－ ing rates of toll would be necessary，and at a private meet－ mg between the representatives of the parties interested it was decided to accept a settlement on the basis intolved：For section ：，consisting of Tasso Lake dams， 3\％2 cents，formerly 5 cents，per thousand feet；section 2 ， consusting of the Tasso Creek， $271 \leq 2$ cents，formerly 25 cents；section 3．West Branch dam improvements， $21 \%$ cents，formerly is cet．．．．：section 4 ，Tasso Creek to Sin－ clair town，$+3 / 5$ cents，formerly $S$ cents；section 5 ，Sin－ clars to Tomawanda Creek， 43 is cents，formerly 5 cents ； section 6，Tonawanda to Kebeccah Creck， $31 ⁄$ cents， formerly， 3 cents，section 7 ，Kebeccalh Creek to the mouth of the rater， $1 /=$ ceats，formerly - cents，ard section 8 ，at the month of the racs，tis cents，formerly $13{ }^{2}$ cents．

## INTERESTING LUMBER SUTT．

I．thoatwin ore timber limits innoling hatf a million dollars has been commenced in the Ontario courts．The plaintiff，are William H．，Robert D．，Charles G．and Willam Hurdman，of Ollalla，and tie defendants are Walter C．Whyte，of Abang，N．Y．，Andren G．Buell，of Burlington，I＇rederich W：Alers，Ollawa，Charles E． Reade，Oitana，and the Hull I umber Company．
buthe gears ago the phantiffs suld their rights in certain namber linats in the proviane of gueber to the defendants． According to lic angecticme the plaintiffs claim a vac－fifth anterest in the assets of the Hall Lumber Co．，ane of the terms of sale being that when certain liabilities assumed by the purchatsiug finm lad beat mat ：le phaintiffs were to reccive the interest now complained，and they contend that the hiabilities hase long since been wiped ont．A wat has been issued ashiag fut an injunction to present the defendunts from selling or disposing of the property．

The Illull Lumber Company，Iimited，is the name of the new wonpany formed by the defendants，and their letters of incorporation give them power io purdaase， the whet or whtherwisc acyuite by any legid and proper means all or any of the business now being carried on by the firm of Buell，Hurdman and Company，as well as that
formerly carried on by Buell, Orr, Hurdman and Company, at the city of Hull, in the province of Quebec, and elsewhere, and the whole or any part of the good-will, stock in trade, assets and property, real and personat, movable and inmovable, of the satil firms of Buell. Orr, Hurdman and Company, and Buell, Hurdman and Company, subject to the obligations, if :ung, affecting the same.
It will probably be some time before the case is finally. brought to trial, as a farge number of witnenses will be examined. Mesurs. Meciarthy, Onler, Hoskin \& Creelman, of Toronto, are aeting for the plantiffs.

## PERSONAL.

We regret to leam of the recent serious illness of Mr. Martin Russell, the well known lumberman of Renfrew, Oir.
The friends of Mr. Thomas Bryce, retail lumber dealer of Toronto, have induced him to contest ward 2 for Alderman.
Mr. A. F. E. Phillips, of the Bruncte Saw Mill Company, New Westminster, B. C., is at presem paying a visit to friends in Omario and Quebec.
' Hon. J. b. Snowball, of Chatham, ג․ B., will leave for England :bout the end of Jamary on his ammal tour, and will be absent about two months.
Ex-Alderman Cramell, secresary of the Bronsons \& Weston L.umber Company, of Oltawa, in response to a large petition prewented by the citizens, has consented to ofer himself as a candidate for the mayorally:
Mr. Martin Power, who represented the large Liverpool lumber firm of Watson \& Todd at Monteal, has gone to St. John, N. B., where he will look after the shipments of his firm from that port during the winter.
At a recent meeting of the shareholders of the Georgian Bay Lumber Co., Mr. W. J. Shepherd, wholas been general manager of the compans, was eiected president, to fill the vacancy camed by the death of the late A. M. Dodge.
We are indebled to Mr. H. G. Rows, of lictoria, B. C., for the partheulars and illustratious of British Columbia mills which appeared u our special November number, and which formed one of the most interesting features of the issue.

The news comes from across the Athatic of the marriage of Mr. John E . Burstall, of the firm of J. Burstail \& Company, Quebee and london. The bride was Miss Green, daughter of Sir William Henry Rhodes Green. Their honeymom included at trip to Canada.
The success which Cemadians atain in forcign countries has again been instameed in the case of Mr. James Connors, a native of little Ridean, near Hawkesbary, Ont., who has recemty been elected to represem Mackinat combly in the Michigan legislature. Mr. Commors left his home about twenty years atgo for California, moving a litte later to St. Ignace, Mich., where he engaged in the lumbering busiuess. if feew years afterwards he had the honor of being elected mayor of St. Ignace.

## TRADE NOTES.

From the $\mathrm{Wm}^{2}$. Hamiton Mtg. Co., of Peterboro', Ont., we have receised catalogues deseribing and illustrating their already well-known makes of engines and boilers. The improved " l'ayne" Automatic Corliss Engince catalogue is neally promed, and contans, besides the numerous illustraturas, a mumber of a aluable tables of calcula. tions relating to the opreation of steam engines, as weil as testmonials from customers. The boiler catalogne likewise comatins numerous tables, and views of the differ. ent wartetes of boblers athed thers sectans. A copg of each of the catalogeme will be forwarded to ally address upon application to the company.

The Dodge llood Split Pulles Comprang, of it Xork street, Toronto, are now offering for inumediate delivery ligh grade lurned and polivhed steel shafting in any dianneter and in any lengh up to it feet each; new designs in cither compresion, grimedeanh or namge complings ; hangers of all kinds, iny drop, of hatest style, adjustable in all directions, with either plain bearings or the Dodge Company s new patent capillirs selfoiling bearings. This is pomenely clamed to be the most up-to date line of power Iramminsion appliancer on the market, and manufacturers and ohlors using shafting, hangers, pulleys, clutches, ete., will do well to get he compang: prices when in want.


Omelal business with the Crown Lands Department brings Mr. Wm. Margach to Toronto about twice a year. Mr. Margach is Crown Timber Agent tor the Rainy River district, with headquarters at Rat Portage, and when in the city before the Christmas holidays he spoke very hopefully of the future of northwestern Ontario. "Lumbering is quite active," he said, "and more men bave been sent to the woods than last year. The quantity of logs taken out this winter will be fully one-third $\mathrm{g}_{\mathrm{i}}$ zater than for any past season for many years, which is accounted for by the fact that Manitoba and the Northwest is our market, and the farmers there have obtained better prices for their wheat and have naturally more money to spend in improvements and new buildings. The farmers in the northwest are gradually becoming more prosperous and are pursuing more business-like methods." Mr. Margach tells me that the mining boom is creating quite a local demand for lumber, and as the attention of capitalists has now been directed to these fields, he anticipates that next season will be one of the most prosperous yet experienced. He expressed his regret that the country did not possess a greater population. Speaking of forest fires he said that during the past summer, owing to wet weather, no fires had occurred within his district, which embraces a territory 200 miles wide and over ${ }^{5} 50$ miles from north to south. It was customary to employ fire rangers, but this year he had withdrawn his men, as the fires, if started, would speedily die out.

A h.umber operator on the Restigouche, in New Brunswick, caused a survey to be made of certain crown lands held by himself and others, believing that another operator was jumbering on the property. A survey proved this to be the case. "Now," said the operator to a friend, "we told this man we believed he was over on our limits. We had this survey made and have shown our contention to be correct. Yet we must, under the law, pay the whole cost of ruming the line along our blocks. If we should allow him to take the logs the government can hold us for the stumparge. In order to get an already determined point to start from, we had to surve; over six miles before coming to our own lands. Once I wanted to run a line for two miles. To do so I would have to start cight miles away. I let it go. They will perhaps tell you in the crown lands office in starting a line to begin at a certain tree on a certain spot on the line of an old survey. I was given as a starting point a cedar tree on a line run forty years ago. The cedar could not be found. The department should run out its block lines more rapidly, and it should insist that one man (as in my present case) should not have to pay the whole cost of a survey between his land and another's. Of course we can hold those logs, but if we do, after this man has gone to all the expense he has, we would be put down as the worst men in the country. I tell you the
lumber operator has troubles that loom up so, times as big as the Sugar Loaf youder."

Masy Canadian lumbermen have during ;it: past month made the acquaintance of Mr. Edial Haynes, of the Timber Trades Journal, of L, n don, England, who has been commissioned w the publishers of that well-known journalil: write up the export lumber trade of Canada a special number proposed to be published ated the first of February. Mr. Haynes has kh connected with the Timber Trades Journal:n over twenty years, and is therefore an enclijs pedia of information on matters pertaining to ff lumber trade of Great Britain, while liis kn.' ledge of that industry in other countries is at $s$ the average. Before reaching Toronto heis spent some time in the principal eastern lum $I$ centres of Canada, such as St. John, Quet s Montreal and Ottawa, and expressed hinise. a being pleased with his visit to these cities, $t$ pecially Quebec, owing to its historical anser tions. Mr. Haynes spent a week in Tore: $t$ going from there to New York. He states: in England there is a growing feeling in fate $t$ purchasing supplies from the colonies, provi: as good value can be obtained. To my g. : tion regarding the probability of the furthe: 1 tension of the Canadian lumber trade: 1 Europe, he replied that he was afraid the dist; between the countries, and the consequent! ! carrying charges, would prevent the profit: shipment of low grade stock, but the quantit better grades exported would certainly comi: to increase. He was surprised that our m. factures of wood were not much greater, a considered this to be one of the most remur. tive ways of utilizing forest products, and stanced in this connection the extensive trad: the Rathbun Company, of Deseronto. ": Canadian manufacturers," added Mr. Ha!: " give little study to the requirements of the E . pean markets, but content themselves withe ing with the shippers. .This is in striking : trast to the Swedish and Russian manufactu: who visit the markets each year in order to come thoroughly acquainted with their demis Of course, here the lumber trade is conductr: a cash basis, and the manufacturer receives; ment for his goods upon delivery to the shif: while in Great Britain groods are always sold time. This, probably, partially accounts forfact that the whole export trade is haniled about a dozen shippers who are finane strong, and who relieve the manufacturer e: responsibility, and in the end this may be most satisfactory method. These shippers $t$ established a connection in England which mi more than the average Canadian imagincs, by means of branch houses are enabled to $h_{2}$ : goods to the best advantage. There are a points to be studied in catering for the lins trade."

Mr. T. H. DeCew, the well-known mill ownes timber merchant, formerly of Essex, Ont., has been visit the past month to his old home. Mr. DeCewis located in Washington Territory, between Tacum Porthand. He owns $3 . j 00$ neres of timber land in On and his mill has a capacity of 90,000 feet per $\mathrm{d}_{\text {a }}$ great deal of the timber is exported to China and J Mr. DeCew says that a peculiar feature of the Cl duty is that it is a specific one, so much per stich, re less of size.

## J. B. SMITH \& SONS' SAW MILL.

Last fall fire laid waste the saw mill of Messers. J. J3. Smith \& Sons at Callendar, Ont., but upon it ashes has been erected a more pretentious and modern structure. In every particular the nalw mill is complete, being well lighted by large windows, while an electric plant furnishes fillummination at night.

The mill is of frame, with heavy timbers, its xdimensions being $132 \times 42$ feet. The roof is hhipped with a cupalo rumning the full length, in iwhich the windows are set. The lath mill ammex ais $30 \times 55$ teet, and the filing room annex $10 \times 30$ feet. On the ground floor is the motive power. 1. Twin Cunningham steam feed eugines drive the steam feed for the dimension carriage, and gunishot steam feed drive the lumber carriages. A Doty engine of 150 h . p. operates the circular t saws, double edger and jack ladder chains, and a Doty engine of 50 h . p., slide valve, runs the balance of the machinery. A Reliance 35 -light machine furnishes the light. Mr. Stephens is the electrician in charge. The pulleys used are : made by the Dodge Wood Split Pulley Co., and the belting is of Scotch manufacture. In the is engine-room are two steam pumps, which, with 1. Six hydrants and 500 feet of hose, furnish the fire protection. The manufacturing machinery consists of three carriages, one driven by steam it feed, and the other two by rope drives operated ! by gunshot steam feeds. There are two circular $\therefore$ saws, one made by the Jas. Robertson Co. and it one by Shurly \& Deitrich. The double edger it: and lath mill machinery, steam niggers, trimin mers, and the two lath tables, besides the carar riages, were mostly built by the Wm. Hamilton re: Mfg. Co.

In the filing room are two large automatic d filing machines, with all accessories. At one ". side is the boiler room, built of brick, containing If. three Goldic \& McCulloch boilers, two of 150 E. h. p. each and one of 100 h . p. Two iron smoke E stacks lave a brick base of 16 feet each. One is 90 inches in diameter by 45 feet above the roof, ui: and the other is 75 inches in diameter by 80 feet to high. Sawdust, etc., is used for tuel. The ia burner is circular, and built of stone, and is surIt: mounted by an iron rim, but uncovered.
$s_{i}$ A well-equipped blacksmith shop, $\sigma_{4} \times 20$ feet, iff supplies all demands for repairs. There are two 0.4 forges, a $22^{\prime \prime}$ lathe swinging 40 inches, an iron or shaper swinging two fect, and an iron drilling tej machine. An upright boiler supplies steam to a ne 20 h. p. engine which operates the machinery.
c: The yard is large, and an engine owned by the be company does all the shunting, etc., of the cars. it On the lake is their tug, the "Sparrow," which $\mathrm{m}_{\mathrm{c}}$ picks up the logs and does all the towing.
he: Mr. Jas. Smith, one of the members of the company, is in charge. The firm manufac:Tre all grades of lumber, lath, shingles, and $\stackrel{n}{ } \mathrm{~S}$ dimension timber.

## IMPORTANT PATENT DECISION.

By recent decision of the Uniced States Circuit Court at i. Cincinnati, O., the Dodge and Philion patent for scparable wood pulleys, covering the compression fastening

Under the patent laws, the user, the seller and the dje facturer are all held to be infringers and liable as such to CE: the qumers of the patent. The Dodge Wood Split Pulley Comphny, of Toronto, is taking procecdings against
infringers of their patent in Canada. infrifyers of their patent in Canada.

## NEW BRUNSWICK LETTER.

## (Begular Correjpuladence of the Canaina Lumbervan.]

l.combirmes have been badly in need ot mow in order to carry on operations in the woods successfully. The weather early in the month was mont unfavorable, crews in some casers finding it impossible to to effectice work. Or late there hase been some light snow-falls, and it is probable that the extent of the colt will not be interfered wilh.

Mesist. Richard Turner, of Quebec, and W. H. Thorne, of this city, liquidators of the St. L.awrence Lumber Company, of Bathurs, have completed their duties and reeeived their discharge foom Judge Tuck. The Si. Lawrence Lumber Company went into liquidation about two years ago. At the time it looked as if there would be serious legral difficulties, as there were conficting interests in this prosince, Quebec and Enghand. The liquidators were able to avoid tronble, and it is understood only about $\$ 1,400$ of the estate was requited to pay all the legal bills. Operations were earried on the first winter and then the properiy was sold. In all about $\$ 237,000$ passed through the hands of the liquidators. The general eaeditors got fifteen cents on the dollar, a better settlement than was looked for at the time of the f:ilure.

The consmetion of a line of railway from Bathurst to Tracadie, as comemplated, will prove of great benefit to the comery:. At Tracadie Senator Snowball has a large satw mill with an annual ontput of nine million fect. Adjacem thereto is a targe area of timber, known as the Sweency block, estimated to yield $100,000,000$ feet of timber. It is owned by an American company, of which Mr. Hill, of Bangor, is the pesiden, and it is said that it is proposed to erect on the property a large saw mill to cut dumber for the United States market. The rail shipments would go via the gulf shore and the Caraquet and I. C. R. Hines through St. John.
At a mecting of the directors of the St. Jolm River Log Driving Company hedd early itl the month, matters in comection with the falure of $\mathrm{l}^{\circ}$. M. Moore were discussed. An offer of $\$ 4,000$ was made by Mr. Moote in sethement of the clain against him, but it was refused as altogether too small. The selecton of I.. C. Stearas, of Caribon, as arbitrator between the log owners and the company was ratified.
Mr. Miles Moore, a son of Mr. Fred. Moore, the wellknown lumber operator of Wondstock, has purchased the property known ats the Craig \& Satwer mill on the Meduxualsek, and will make repairs thereto.

## bits of lu'mber.

The revenue from New Brunswick crown lands will this year be ahead of last year's figures, which were Sifo,000.
Hon. J. B. snowball, of Chatham, has commenced the construction of two steam tugs for service in comnection with his lumber business.
Mr. Frederick Brown has sold his interest in the milling business at Cross Creck. The remaining partners, Messrs E. \& W. Sanson, will contiaue the business.

Mr. William Cunningham left the city this week for New York, en route to 1 Iamilton, Bemmada, wherehe has heen engiged to fit up a saw mill. The work will require about two months.
St. Jons, December 2 3, 1896 .

## BRITISH COLUMBIA LETTER.

(Regular Cortespontente of the Cavada Lexurekian)
AT the time of writing it is feared that the lumber trust formed last winter to control prices has gone to the wall, so far as coastwise shipments are concerned at least. The consensus of opinion is that the first of January will witness its ternmation. Since the first of the momh prices have been reduced from $\$$ ut to $\$ 9.50$ per thousand fect. This was brought about by the cutting of prices by retail dealers in California, which compelled the trust to take such action. The Central Lumber Company was formed a litte over a year ago by the big mitts of the Pacific coast, including most of those in this province. These controlled the large mijority of the retail yard, and after months of hatd work the mills of the coast and the dealers were united under the central combine. Prices were soon after raised, and the agreement entered into was dated January ist, iSg . It was to ternmate in a year, by which time the movers of the enterpise hoped to cement the organization so that it would last for years.

The attempt has been futile, however, owing to the diversity of interests of the lasge number of mill men and dealer, who became identified with the Central Lamber Company. The latge mannfatherer, hopo, however, to hold :egether for another year to control the foreign trade, and their efforts ane bow being directed towards this cond.
Bitush Columbia humber mannfacherers are looking for an inereaved trade with china. The Chine-ce Foreign Office has insued a secret order gin ing pemainion for the
comntruction of railuays from Hankow to Canton, and comptraction of railuays from Hankow to Canton, and
ironn llankon to Soochow. As China is laygely denuded from llankow to Soochow. As China in hatgely denuded
of her timber, the supply, will be furnished fargely by forejen countris, and lBritish Columbia should certainly receice a fair share of the trade.
G. O. Buehaman is making extemive improtements to his save mill plamt at Kisho. The shingle capacity has been inereased from 20,000 to $; 0,000$ per day by the addition of a mew machine, and the eapacity of the satw mill will be doubled, which has necessitated the enlarging of the buildings. In addition to this at complete wood-working plamt has heen ordered. Mr. Buchanan reports a busy season, and the consumption of logs has been much greater than was anticipated.
conse chars.
The limits of new markets for Douylas fir have not yet been reached. The British Columbia Mills, Timber \& Tiading Co., of Vancouver, B. C., made a shipment last month to Gibraltar, Spain.

The local government have placed upon the matrket to, $31+$ arres of timber lend on Queen Charlotte Istand, the lease being for twemy-one jears. Offers are invited until the aist January.
During the month of November twenty-lwo steamship chaters were reported for foreign points. The season thus far has been more active thatulast year.

New W'estminstea, B. C., Dec. 18, 1896.

## IANCASTER MACHINE WORKS.

Straten on the bank of the beantiful l.ake St. Francis, in the old Seoteh county of Glengatry', is the pretly litile town of lancaster. Among the important basiness firms of the town is the Lancanter Machine Works. This enterprise was eutablished in 1 SSI by the late William Stafford, a native of IIgde, Lancashire, England, who previously had carried on a similar business in Montreal. In 1884 the works were completely destrojed by fire, but were immediately replaced by a more modern and substantial building and plant.
A little over a year ago the head of the firm was aceidentally killed on the G. T. R., and since that time the b.sinesis has been carried on by his two sons, Messrs. A. \& IV. J. Stafford. They do an extensive irade in general saw mill plant and hold a number of patents on this and other machinery. Ttio accompanying eut represems a


Imponin Stit Rolimpr Made by Inscaster Machine Vorks.
set roller they manufacture which has nany advantafes in its favor, notably those of contenience, durability and nealness. It consists of a roller $A$ carried on a radiat arm E, which in turn is hinged to a traversing carriage sliding upon a planed bed or base, the whole of which is securely bolted to the saw frame or other fivorable position in front of the saw. A spring $C$ at the base of the radial arm keeps the rollor in place, but when a knot or other unesen surface comes in contact with the roller this spring allows it to give way until the obstruefion has passed. The roller is set by means of the hand whed D, which controls the traversing motion of the carriate by neans of a screw shaft beneath the of the and inn judicating finger :md wuare bencath the same, and in mancatmg finger and grage assists the sawyer in sthing the roller for the thickness of his cut. While slabbing, the retaining pin $B$ is raised and the roller swang out of place A harge mamber of mill owners recognating the merits of this incxpensise machine, hate placed them in their mills and pronounce them very
In addition to the manufacture of saw mill appliances, this enterprisuly firm make a specialty of tannery and dairy machinery, and lately made several shipments of machinery to Eiropie. They are also woring up a good trade in a special line of cotton mill machinery.

## THE NEWS.

-Gimour \& Company's new mill at Canoe Lake, Ont, has closed down for the season.
-Jacob Lawrence \& Son, lumber merehants, of Sarnia, Ont., have opened a lumber yard at Bothwell.
-John McCormack, of Ouawa, in fitting up a small saw mill in L.ow township for the Asbestos Mining Co.
-Thumas McCamus has returned to his home at Bobcaygeon, Ont., from Lake Temincamingue, where he has erected a saw and shingle mill.
-It is stated that the Emery Lumber Company are pulling down their saw mill in Michigan and intend remos ing to Byng Inlet, where in future all their logs will be manufactured.
-George Merith, of Chatham, and J. II. Hamill, of Toronto, have purchased an extensive timber limit in Gcorgin, in the United States, and will conduct lumber ope ations there on a large scale.
-Charles Stewart has purchased W. L. Herriman \& Son's mill at Ilonora, Ont., and is fiting it up for work this winter. Mr. Stewart is a practical mill man, and will certainly mect with success.
-The Rathbun Company are said to own two hundred million feet of hemlock, as well as a large quantity of cedar, in the bownships of Grimsthorpe and Anglesea, North Hastings. At the present rate of cutting the timber will last sixteen years.
-A gift was recently made by Mr. E. Le Roi Nellis, of St. John, N. B., to Major Win. McKinley, president-elect of the United States, of a large rocking chair weighing 175 pounds. It was made of Canadian white ash, and is said to have been much admired.
-William Robinson, lumber valuator, of Bobcaygeon, Ont., bas lately returned from the Spanish river, where he spent six weeks estimating the quamtity of standing timber on the different berths recently sold by the Ontario government.
-The Crown lands Deparment of Ontario have sent a corps of rangers to examine into the value ardextent of the pine forests existing north of Lake Wahmapitae, with a view to opening the land to miners. The land has never been opened to prospectors, but it is said that salteable mineral deposits are to be found on portions of the territory.
-Several ane satwints are being erected along the line of the Lake St. John Railway in Quebec. Mr. Burns' new steam mill at St. Gabriel has commenced sawing and will be kept in operation all winter. A new mill is being built at Lake Sergent and another at Kenogeni, near Chicoutimi. It is estimated that over one million logs: will be taten out along the line of the raikway during the present winter.
-Stehelin Bros., lumber operators, have arranged for the construction of a railway from their limits to Weymouth, N. S. The rails are to be of poles eight inches in diameter, and the wheels are to be concave to stit the roundiug surface on which they will run. Probably the only other pole road in Canada is that operated by the Bass River Intusorial Comyany from their property at Economy to the refincries.
-The Rallibun Company have closed down their lumber and shingle mills at Lindsay, Ont., after a most successful season. Durimg the seven months of operation, there were shipped fifty-one large cars of saw-dust, averaging twenty cords to the car, and making a total of 1,020 cords. Mr. G. H. M. Baker, the local manager, has gone to Manitoulin and the North Shore to arrange for getting out logs during the winter.
-In his budget's speech in the Quebee Legislature, Hon. Mr. Mantel referred to the increasing revenues derived by the province from crown tands. For the fiscal year ending 1856.87 the receipls were $\$ 602,000$, and the expendittre in connection therewith $\$ 154,000$, while for the fiseal year ending June goth last the expenditure was only $\$ 185,000$, while the recripts were $\$ 1,045,000$. He further referred to the high prices realized for the timber berths at the public sale in May last.

- A report received at the Department of Trade and Commerce, Ottawa, from J. W. Down, Bath Bridge, Bristol, says: "During the present month I have received many letters from firms in Canada interested in the exportation of timber, and I have placed their communications before the principal Bristol timber merchants. Bristot is a large centre for timber from the Baltic, and from what I can gather there is room here for much larger shipments of Camadian timber, and I trust my efforts in this direction will lead to much larger business being done next season."
-The annual meeting of the Maine Lumbermen's and Land Owners' Association was held at Bangor on the zoth of November. Secretary and Treasurer Wilson Crosby read his reports, which were accepted. These officers were elected; B. F. Davis, Bangor, president; Turner Buswell, Skowhegan, IV. W. Brown, Porlland, Llewellyn Powers, Houlton, John K. Ames, Machins, M. G. Shaw, Bath, vice-presidents; J. Manchester Haynes, Augusta, S. P. Bass, Bangor, Geo. Murchie, Calais, Gco. B. Dunn, Houlton, Cornelius Murphy, Old Town, executive committee; Wilson Crosby, Bangor, elerk and treasurer; S. H. Boardman, F. H. Appleton and C. P. Webber, Bangor, auditing comminte.
-Another dispute as to water rights came up before the Ontario Commissioner of Crown Lands recently. Messrs. Merac and Mackenzic are the owners of a sawmill on the Bomechere river, a branch of the Oltawa. A little further down the river and on the opposite side are situated the electric works of the Bonfield estate. MeRae
and Mackenzie claim that certain works which the fied people are building will deprice them of the pres use of the water, and hey ask permission to lease a $\mathrm{ni}_{\mathrm{i}}$ lot on the same side of the river as the Bonfield workree order that they may build a dam and secure water pow The Bonfield estate oppose the granting of such a te. as they cham their wooks will be injured thereby.


IIMBEXXIIS GOHIIIT
mantencturers of the


In Jaccets, Pants and Sbirts
WOOL SOCKS and MITTS
VAN GOODS $\begin{gathered}\text { specially for the } \\ \text { i.wanker Trate. }\end{gathered}$

Write for Prices and Samples.
W. Carss \& Co. ORILLIA, ONT.

## Remember

Hhen selecting yolr tea
iN THE FUTURE THAT . . .

## LUDELLA CEYLON TEA

is growing more popular each day. It is first favorite with everyone who has tried it, and being the finest produced, should please you. Try It ! In Lead Packages only 25, 40, 50 and 60 cts .

## H. P. ECKHARDT \& CO.

 Wholesale AgentsTORONTO

## Galt Machine Knife Works



## MACHINE KNIVES

## $\sigma^{- \text {For }}$ Woodworking Machines . Sena for frice List.

PETER HAY
Galt, Ont.

## RAILS FOR TRAMW

 $N$ iron nills for tmmays and loging 12 lbs. per yard and upurards; estimite compicte ourtr.
john J. Gartshof to Frome St. Wes,

## Electric: Supplies

TEエEPEIONJ
TEIEGRAPE
曰ImCTEIC IIG

Write for Illustrated Catalos:
John Starr, Son \& C
Minfrs, and Dealers in
ELECTRICAL SUPPI
Box 448 of Hali

## 1 CASUALITIES.

- A man named levesque was killed by the falling of a rect while working in the lumber camp of Gillies' Bros. at Jout Creek.
, - While working in one of the lluntsville lamber Co.'s amps, George llubbard was neverely injured by a tree alling upon him.
- White workiag in the woods at Kleinburg, Ont., fancan Medlliter was struck by a falling tree and $k$ his leg broken.
-Joseph Crosby, aged go years, was working in a saw tili at Lake Tuskett, N. S., when his elothes caught in te belting and he sustained fatal injuries.
-James l'ainter, a resident of Woodland, N. B., was illed in the woods on the Southwest Miramichi by the tlling of a large limb. Deceased was 58 years of age.
- A resident of Notre Dame du Rosnire, Que., named Thanase Blanchet, while engaged in his mill, was precipi-
lated on the circular saw in motion, by which he was terribly lacerated and died almost instantly.
-A lumberman named Joseph McPeak was brought to Toronto from Gravenhurst recently suffering from a broken leg. The ingury was sustained by a falling tree while working in the lumber woods.
--While a gang of men were at work in the woods about six miles north of Alvinston, Ont., one of their numbor named Lester Smith, aged 21 years, was struck on the head by the splitting of a tree, resultug in his death a short time afterwards.

Frank Buchanan is erecting a new saw mill at Bass Lake, Ont.
In one of the St. An:hony Lumber Company's camps at Cache Bay, Ont., a pine tree was cut making seven logs 16 feet long, the smallest neasuring 32 inches at the top end.

The act of incorporation of the kemptille lamber Manufacturing Company, of Kempteille, N. S., has been extended to inelude the manufacture of doors, sasthes, etc., and the capital stock has been inereased from $\$_{12,00}$ to $\$ 25,000$.
The advertisers in this paper ars the mone progrensive and reliable men in the machinery and supply business. You will find it to your interest to write then for partichlars and prices of their goods. In doing so kindly mention that you saw their advertisement in The limbire man.
Twenty-seven Poles recently arrived from Detroit on their way to Smith's lumbering camp at Ruscomb Station, bringing with them tools, el thing and provisions. The custom officers refused to allow them to pass without iny. ing a duty ranging from 25 to 35 per cent. on the goods, which was finally agreed to. This is said to be the first instance in which a duty of this character hats been collected.

## "Little Giant" Turbine......

Vertical and Horizontal $*$ Built in 44 Sizes


Complete in its own case.
No expensive flume required.
Highest percentage of power guarananteed at full and partial gate opening.
Machine Dressed Gearing, Shafting, Pulleys, Hangers, Etc.

WRITE FOR CATALOGUES AND GEAR LISTS
kı: $\quad 3.53$ Little Giants sold ros the Canadian Goverment.

T
C. WILSON \& CO.

GLENORA, ONT.

## The Royal Electric Company

 MONTREAL, QUE. Western 0tfice : TORONTO, ONT. Cable and Telegraph Address, " Roylectic."
## Electrical Machinery ${ }^{{ }^{n} \text { uc }}$ Apparatus

LIGEX and POMEEXP.
Sipcial. Atrention Given to

## LONG DISTANGE TRANSMISSION OF ELECTRICITY

FOR IIGFT AND FOWER AISO FOR


Dlstant water powers utllized and mills Ilghted and operated safely. CORRESPONDENCE SOLICITED.

## LUMBERMAN'S <br> VEST- 'OCKET <br> INSPEGTION BOOK

Containing Rules for the Inspection and Mcasuring of Pine and Hardwood Lumber in the leading markets of Canada and the United Statcs. Bmbracing also many useful tables and calculations or eperyday service to lumbermen.

Prepared by the Editor of the

- Canada Lumberman."


## Toronto, Canada

C H. MORTIMER, Pubilsher 1895

THE above is a fac simile of the titile page of the latest and most complete Lumber and Inspection Book published.
We shall be pleased to senó you a copy on recelpt of four 3 cent Canadian postage stamps 0.0 。
the CANADA LUMBERMAN, Toronto, Cancale

RE YOU WANTINE
STANDING TIMBER
I Gan Supply You
35, 6 oo acres in a block vituxted un water -gan be deliv


and als 100 nallion ieet of llemick,
and 50
43,672 acres, containing:


 at $\$ 3.00$ jer M .
Computed by a competent Ontario manger.
II. G. lROSS,

Victoria, B. C.


OUR EXTRA HARD.MADE
AXE Thir ixe stands beter in frosty are unade . Send for sample. pant sup,

GRHPBLIL BROS.
Minfs.
St. John, K. B.

Mention the Lemberman when corresponding with advertisers.



For Drying LUMBER
Staves, Heading, Shingles, $\gamma$

The Latest The Cheapest Fnd Best

Cilatiaat, Ont., June agth, 1. JdS. S. PARMENTER, Flunhing, N. Y. Drar Sal: We take very great pleasure in able to cay rom neany one jears use of $\ddagger$ terl? Drs, Kiln, we find it aw.ay alread of anything ", yel tried for thomughly crying lumber withoul it,
it in the least. So far we have found exhaus: alone sufficient for our purpore, so that it alow cons us nothing to run it. We thorough)ly ing. oak, rock elm, balma and other hardweod lusuber:
time find is a splendid kiln for drying white onk be: does its work so naturally that neither hulte nofic are injured bs it.

CHATHAM MFG. CO., 1 -
D R. Van Allen, Preident.
J. S. PARMENTE
patentee
Canadian 0flice- Head OfliceWOODSTOCK, ONT. FLUSHING,

## The A. R. WILLIAMS MACHINERY CO., Lti

HAVE FOR SALE THE FOLLOWING:

cOMPLETE OUTFIT of Saw Mill, Shingle Mill, consisting of one Three Head Block Saw Mill, two Large Engines, one 65 h .p. Boiler, Shingle Machine, Jointer and Packer; and Chopping Mill with Three Acres of Land. Wet and Dry Yard, with lots of Timber near.

PLANING MILL OUTFIT, consisting of Engine and Boiler, Planer, Matcher and Moulder Combined, with a Full Ser of Sash and Door Machinery, Shafting. Pulleys, Belting, Etc., in good town.

"ECIIPSE:" PLANER, MATCHER AND MOULDER.-DOES GREAT VARIETY AND FINEST WORK.
Sole Canadian Agents for the Genuine Sturtevant Fans and Heaters for Dry Kilns, Shaving Fans, Blowers; S. J. Shimer, Sons \& Co.'s Celebrated Shimer Matcher Heads, Door and Sash Heads ; E. Harrington, Sons \& Co.'s well-known Chain Hoists and Overhead Tramway.

##  <br> A Thoroughly Good but Cheap.... <br> Saw Gapliage: ouve $3^{1 / 2}$



We make in Different Sizes of Carriages from No. o to No. 6for any size Logs up to 6 and 8 feet in diameter and any length.

with 3 Unbreakable Steel Girder Fractional llead-13locks, opening so
, Reliance Dog; 2 Large Syle Pull Dogs; Reliance Set Works with Index, $S_{p}$ ing Receder, 6 Axles and 12 fourteen-inch Wheels; so feet $V$ and Flat-Rolled Steel Track in 10 -foot lenglls; Rope Feed Roller and Ratehet to titke up Slack.
This Carriage could be slighthe inereased in cost by Cut Steel Segments and linions in Iog Seats; Reliance Dog in each Knee and Cast Steel Truck Wheels.

Band Saws and . .
Band Saw Tools


The Holyoke Pulp Wood Barker
Patent Attachment to Barker not shown, turning wood continually while knives bark it ; increases capacity 25 1 $30 \%$. heavy cutting-off saws, wet gilinders, etc.


 Soft Woods Without Steaming-a Very Profitable Addition to any Saw Mill.

The Ghamion pansen narccuse Extended Finmo and and MOULDER, with Belted-all Feed-Rolls Driven-a Ileavy, Fast and Very lopular Machine.

$$
\begin{array}{lccc}
\text { ESTABLISHED } & - & - & 1844 \\
\text { INCORPORATED } & - & - & 1874 \\
\text { NEW WORKS OCCUPIED } & 1896
\end{array}
$$



Everuthing for Saw Mills Get Our Quotations
 oni

JOHN SCULLY \& CO.
Estamlished ibp. TORONTO
timber limits bought and sold
Contractor: I.umbermens and Mining $\mathrm{Co}^{\circ}$, Pamt anci Surphics
Light Loconotive. Raih of all kinds

mining macmintiry- New and hecondu.hnd.


Over one Million Sold. Most mmplete haok of its kibder er pubinshet. Gives meacurements of all kinds or Lumber, logs, Planky, Timber: Ilims to L.umber Care of Saws: Curduomd Iables: Fieling Itees Grwith of Tres, IMnd Measure: Woges, Rent, Baand, nteres. Stave and feading belts, gic. Cinada. illustrated edition of 1895 . Ask your biok eller for it.
S. B. FISHBR, Box 238 , Rochester, N. Y.
d. D. SHIER

## Dlanupacturer op

Lumber, Lath \& \&hingles BRAGEBRIDGE, ONT.

## MIGHIGAN

Are you thinking of moving to better your condition?

If so, come to Michigan, where you can get comfortable liting, good markets, grod neighborhood, reasonable transportation for your products. A Prosiferoes State!
The Flint \& Pere Marquette
R. R. Go.
have good lands for sale, prices ranging from SELEN TO FIFTEES noldars per acre, according to location and timber; easy terms.

You make no mistake locating in this territory:
行 ADIDRESS:
A. Patriarche, Traffic Manager Saginaw, Mich.

Your Stomach Distresses You
aftereating ohearty meal, and the result is a chronic caso of Indigestion, Sour Stomach, Mcartbura, Dsppersia, or a bilious attack.

## RIPA."S TABULES

Promoto Digestion. Regatato zho




 ond orys famils. Price $\overline{\text { so Centan }}$ bor. At


OR A CHANGE IN LOCATION?
It you are nont sutisfied with jour present site, or if
yout are tot doing quite as welf as you nould like to you are tot doing quite as welf as you would like to Hhynis Contral if R. or the Yatoo \& Mixixisippi Yalley
 :lewta, Lowa, Wiconsin, Illincis, Indiana, Kentucks

FINE SITES FOR NEW MILLS BEST OF FREICHT FACILITIES

Coal FieldshoDistabibuting Centers
INTELLICENT HELP OF ALL KINDS MANY KINOS OF RAW MATERIAL
For full information write to
copp of the pamplet entited
100 cities WAWTINGINDUSTRIES
and Towns
This will give gou the population, city and county
delt, death rate, assessed aluation of property deht, death rate. assessed saluation of property, tax sired, etc.
To ound indutries, which will bear investigation, subntantial inducements will be given by many of the
places on the lines of the $1 l l i n o i s C e n t r a l$
$R$ is the only road urder one management running through from the North. Western States to the Gulf of Mexico. GEO. C. POWER, Industrial Commistioner I.C.R.R.
Co., so6 Central Station, Chicago.

## 

Sole Canadian Agents :-: Prices Reduced. WATEROUS, BRANTFORD, CANADA.

## 

## IT COSTS YOU NOTHIN FOR OUR <br> Automatic "Compression" <br>  <br> UNLESS OUR GLARAMTEE IS FLLITLLED <br> To convince you of the Superiority of our Process, write us for Catalogue "C, aud Testimonials. <br> Have you ever seon our Channel Steel - . $P$ <br> 



## SIXTEEN

REASONS,
and how to
FVOID THEM


Being instructions to filers on the care of large band saw blades used in manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving reasons for breaking : analyzing each oeason; giving instructions to dispense with: causes as laid down in each reason; and full details on filing and brazing proper styles of hammers to use are illustrated and described, and views of b. showing the blows of the different styles of hammers form an important part of illustrations. Improper and unequal tension are then treated, and the manne properly setting irregular teeth is described. In connection with the treatise is a tory of the invention, manufacture and use of the saw from its orign to the pre time. The work in whole makes an accumulation of information such as has r: before been published.

The book is printed on fine paper, good clear type, and is bandsomely ands stantially bound in cloth. It will be sent to sny address on receipt of the $r$, ONE DOLLAR.
Address- CANADA LUMBERMAN, Torminto Ot.

FOR SAW AND SHINGLE MILLS

We make a Special Strong and Heavy : : : : : : : : : : WOOD SPLIT PULLE' for Saw and Shingle Mills.
Millmen, when Overhauling or Extending, write for Prices. We can save you money and gi you good satisfaction.

> DODGE
> WOOD-SPLIT PULLEY CO.


Office :
74 York St. toronto
 $S T E A M R O A D$ MAKER
 **** SHURLY \& DIETRICH

 The only Saw Manufacturers in the world who export Saws in harge

sale prophiturs of the segret cremigh process of temperine : : Our Silver Sterei Saws are Unequalled

## Dauntiless Slingle and Heading Machine

$\because$ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

## THE FRAME

:... Is of Iron throughout, very Beavy and rigid, strongly bolted knd braced.

THE CARRIAGE———. .... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block is inches wide and 19 inches long, adjustable for 16 -inch or 18 -inch shingles.

[cory.]
Hastinges, Dec. 3. 8894. F. J. Drake, Essq., Belleville. Dear Sir,-We have waited Two years before giving you our idea of your machinery. This we do to thorouglily test it, and can now say we know what it can do.
Your Saw Mill is equal, or nearly equal to any we hase seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up 10 your guarantee, 40 M per diay. We have tested with eight men.
The Stuingle Mill cannot be bealen for any kind of timber. Ours being in a manner a custom mill, we have good, bad and indifferent timber, but for all i
does the work satusfactorily does the work sattsfactorily.

You may use this in any way you please, or refer to us at any iime.
(Sgd.)W. J. \& H. W. Fowlos.

## 

## The DAKE STEAM FEED <br> enodirs tik yollowing advantagik:

 Simplicity of Construction, Positive and Easy Management, Esonomical Use oi Steam, Small Space Occupied, Cheapness,
Easy Adaptation to elther New Mills or those now in use.
The movement of the engine in either direction is under the absolute control of the sawyer, thus accommodating the speed f the feed to the size of the logs.
Mill men who hate used other makess of Steam Feeds, comment favorably on the economical use of steam of our feed over others. Write for Catalogue and full particulars.

THE PHELPS MRCHHE CO.

## $5(\pi)$

(t(i) ${ }^{3}$

A. MOPHERSON Manulacturer of SHAKHK HIOHHSEL BITS

For Inserted Tooth Saws.
Wananted equal to any on the market.
Also Alanufacturer of
Locomotives and Trucks for the Pole System of Tramways for handling log: and lumber in the woods.

Correspondence Soliciled.
A. MoPherson - oxcor, your scoilh

## SUPPLIES

 OF ALL KINDSChains, Ropes, Axes, Files, Bar Iron, Horse Shoes, Peavy Cant Dogs.

## RICE LEWIS \& SOI

 Cor. King and Victoria Sts.TORONTO

Every Lumberman wants it
35 cents buys

## Scribnerp's Lumber am Lol Book

SAVES TIME
SAVES MISTAKES
SAVES MONE

BP:MfUl, OF EvERy-DAY,
Address:
Jractical Information The Canada Lumineritan, Toronte

## ALEX. DUNBAR \& SON Yoodistock, N.E.

Manufacturers of . . . . .<br>

## Saw-Mill Machinhery

 OF ALL KINDSIncluding ROTARY SAW MILLS (3 sizes), CLAPBOARD SAWI: MACHINES, CLAPBOARD PLANING AND FINISHING MACHI ERY, SHINGLE MACHINES, STEAM ENGINES, Etc.

WRITE FOR FURTHER PARTICULARS
ALEX. DUNBAR \& SONS - Woodstock, N.

## Uss iennur. PIUK LUMBEERIIG TOOLS <br>  <br> By Gar Load or Dotar Pike Poles, Skididing Tongs, Boom Phinins Lowest Prices - THOMAS PINK <br> $\odot-$ PDMBROKE, ONT.



MIDDLEST. $\qquad$


OTTAWA SAW WORKS CO. OTTAWA,ONT.

