

1896.
NEW ZEALAND.

TIMBER CONFERENCE

HELD AT WELLINGTON, IN JULY, 1896 (REPORT OF).

Presented to both Houses of the General Assembly by Command of His Excellency.

The CHAIRMAN of the CONFERENCE to the Hon. the PREMIER.

SIR,—

Wellington, 23rd July, 1896.

I have the honour, by request, to submit the report of the proceedings and recommendations of the Timber Conference.

The various matters submitted by you to the Conference were referred to committees appointed at the first meeting. These committees, after deliberation, brought up reports, which, after being considered and amended by the Conference, are now submitted to the Government for its favourable consideration and adoption.

Owing to a certain amount of indefiniteness in the orders of reference, caused by the hasty way they had to be prepared, and some misapprehension on the part of some of the committees, the reports overlap each other on a few points. Had there been time, I would have asked the Conference to revise these. However, the appearance of these repetitions in the report may serve to emphasize the recommendations of the Conference on the subjects so treated.

The Conference was almost unanimous in its condemnation of the proposed "close season" for felling timber. I think there can be no doubt that it would be impossible to profitably work the timber from New Zealand forests if the observance of a close season were made compulsory.

The recommendations of the Forestry Committee on the importance of the sawmillers utilising the valuable timber on bush-lands intended for settlement, the conservation, wherever practicable, of existing forests, and the planting of forests for future use, were received with enthusiasm by the Conference, and unanimously adopted.

The Conference was very much divided on the question of a uniform system for the disposal of timber on Crown lands. One section favouring the sale of the timber by auction, on an estimated quantity and an upset-price; while the other approved of sale by royalty on the timber actually cut. The report recommends both modes, and it will be for the Government to determine which it is best to adopt in the public interest. All were of opinion that large areas should be made available to the sawmiller, and that, except in the case of lands suitable and required for settlement, there should be no unnecessary restriction in the time allowed for removing the timber.

The recommendation that timber for export only should be carried by rail at Class F rates is urged, if it can be so carried at a fair profit to the Railway Department.

The importance of securing profitable markets beyond the colony was carefully considered; and it is hoped that those most interested will unite in sending well-prepared trial lots, under proper supervision, to the English and Continental markets. These lots should be so selected and prepared that, in the event of their meeting a demand, they could be repeated, of the same class and get-up.

The question of whether similar conferences should be held annually was not discussed by the Conference, but I think it merits the favourable attention of the Government.

In conclusion, I have, on behalf of the Conference, to tender you our best thanks for calling the Conference together, also for the able address with which you opened the Conference, and for the satisfactory arrangements made for carrying on the business thereof.

I have, &c.,

LEMUEL J. BAGNALL,

Vice-President and Acting-President of the
Timber Conference.

The Hon. the Premier, Wellington.

REPORTS OF COMMITTEES.

No. 1. COMMITTEE,

EXPORTATION.

Your committee beg to report as follows:—

Kahikatea (white-pine):

- (a.) That it is neither necessary nor practicable to define any particular season of the year for felling timber.
- (b.) That it is of the utmost importance that all timber should be cut true to measure, with square ends in every case.
- (c.) That it is necessary that this timber should be seasoned sufficiently to reach the market for which it is intended in first-class condition. To effect this, artificial drying may be necessary in some districts.

Rimu:

Sections (a), (b), and (c), under the above heading, “Kahikatea,” equally apply to this timber.

Re Export Trade: Markets.

London and the Continent: It is recommended that trial-shipments be sent under proper supervision by the shippers.

Africa: From information recently received, it is believed that the timbers above mentioned will be in demand shortly.

Melbourne: It appears there is no market at present for rimu; but this trade should be fostered.

Re London Wharf: That it is the opinion of this committee the time has not yet arrived to ask the Government to lease a wharf in London for the New Zealand timber trade.

Intercolonial Trade.

That this trade has increased considerably during the past two years. The consumption of kahikatea, in particular, has been doubled. And the future of the trade depends entirely upon the action of the sawmillers in sending timber of a uniform quality, well prepared, and in ceasing unhealthy competition among themselves.

Railage for Export.

That the Government be requested to carry by rail all timber for export only at Class F rates.

Tarpaulins for Export.

That the Government be requested to supply the necessary tarpaulins for seasoned timber for export only, at a charge of 1s. per truck.

THOMAS TANNER, Chairman.

No. 2 COMMITTEE.

APPOINTED AT THE TIMBER CONFERENCE TO REPORT ON SAWMILLING, LOCAL MARKETS, AND RAILWAY TARIFF, 20TH JULY, 1896.

MESSRS. H. W. Smith, Brownlee, H. Cornfoot, H. Brown, G. Mackie, W. L. Luxford, W. Morris, J. Butler, McCallum. Mr. H. W. Smith was appointed chairman, Mr. W. L. Luxford was appointed secretary.

After several meetings and careful consideration the committee beg to submit the following report:—

Leasing Crown Lands.

1. The royalty system, as arrived at from returns of timber actually cut by the mill, is the most satisfactory in respect of avoiding all conflict of opinion between valuator and buyer, whereas, the valuation-and-purchase system induces more methodical and thorough clearing out of all sawmilling timber from the area surveyed, and also constrains the sawmiller to find, where possible, markets for off-cut, &c., which under the royalty system might be neglected.

The system of survey and sale by auction is distinctly objectionable, inasmuch as large companies and syndicates are thereby enabled to successfully pursue a policy of outbidding and over-weighting persons of more limited capital.

Recommended, That the kauri and other timbers in North Island bush be put upon the same footing in respect of sawmilling areas as prevails in the South Island, and that there be as much uniformity as possible in the method of dealing with all the bush areas in the colony, giving general preference to the royalty system arrived at from returns of timber actually cut.

2. *Recommended,* That the Government devise some means by which the sawmiller may be enabled to lease lands from the Natives for the purpose of removing the timber.

3. *Recommended,* That, in the case of a mixed bush, where one particular description of timber has been cut out on one area the miller should have the right of cutting on the next area; also, should any small area of isolated timber be available for any particular mill, the same shall be allowed to be cut under the supervision of the Ranger.

4. *Recommended,* That in cases of mills working on Midland Railway reserves from which at present the Government are receiving royalties it is proposed to ask the Government to protect such millers to the extent of granting them permission to record their applications for areas of timber lands, so that in the event of the reserves reverting to the Crown they would have a preferential right to timber growing on lands adjacent to such mills according to regulations in force.

Railway Tariff.

We find that, by the extension of roads and railways, the bush lands of the colony have now been made so accessible that it has had the effect of inducing a number of persons to embark in the timber industry, until it has now become a battle for existence; and unless something be done as early as possible to find new markets for the increased production a number of the weakest mill-owners will be compelled to give up the contest, thereby entailing a very serious loss upon themselves and the colony. With a view of removing this undesirable state of affairs it is proposed to try foreign markets. In entering upon this business it is patent that a good article must be produced, and at the lowest price possible, to enable us to obtain an opening. We feel sure that the Government will give us every assistance in their power in what we have no hesitation in saying is the most important industry in the colony. From the nature of the article of our manufacture, freight and wharfage dues enter very largely into the cost. Seeing the very large interest at stake, we very respectfully ask the Government to help us in this matter by carrying all timber, including white-pine for butter-boxes, &c., manufactured in the colony for export from the colony, under Classes F or Q of the railway regulations, and also by granting a reduction of jetty dues wherever such are under Government control. We also beg to call your attention to the very high rates charged to inland stations in contrast to places which have the advantage of water-carriage in competition with the railways. The increased price to inland stations no doubt tends very considerably to lessen local consumption. We would also remind the Government that they do no loading or unloading, take no responsibility whatever, no covers or covered wagons required, unless for seasoned and manufactured timbers. We also beg to call your attention to the very unfair regulation under which rusticated weatherboards, tongued-and-grooved flooring and lining, and timber of irregular width and thickness are measured.

We also find that before we can hope for any success to be obtained in exporting timber to foreign countries it must be thoroughly seasoned, and to do this a very considerable outlay has to be incurred for drying-sheds. To partially recoup sawmillers for this large outlay we suggest that timber so treated should be carried under Class Q.

We also recommend that where green timber has to be railed to drying-sheds, the charges be held over until the timber is removed from the sheds for export.

That the Government be requested to retain a sufficient number of flat trucks for the timber business, as being the most convenient for loading.

Local Timber Trade.

Recommended, That the Government be requested to establish a Timber Industry Board, with annual sittings in Wellington, such Board to consist of delegates from sawmillers and timber merchants, and also one or more representatives of the Government. The constitution of this Board would greatly stimulate the formation of local associations in the various timber districts, thereby bringing all engaged in the industry in close touch with the Government and with one another.

That, whereas sawmillers in many cases experience great difficulties in obtaining tramway rights along public roads and through private lands, the Government be requested to introduce a measure dealing with the matter, and in the case of Crown lands extending the present term of five years to twenty-one years if required, and that any future sales of Crown lands likely to be effected should be made subject to tramway rights.

The various sizes of timber specified by different architects and builders is a source of great loss to the sawmillers, and we would suggest that a conference of architects be called to determine a stock list of sizes of timber, and we would also suggest that the sawmillers at the present Conference take steps to obtain uniform patterns of flooring and lining.

Recommended, That, with a view to the introduction of improved machinery, steps be taken to obtain and distribute among sawmillers all information relating to same.

HENRY W. SMITH, Chairman.

No. 3 COMMITTEE.

THE committee appointed for the purpose of considering the selection and classification of timbers suitable for building and furniture for export purposes report as follows:—

1. That producers be specially advised, when preparing timber for export, to use only that cut from matured trees.

2. That all undressed timber should stand the full size, and be evenly cut.

3. That all mouldings and architraves should be run from seasoned timber.

4. That kilns for drying, after the mode in vogue in Queensland and some of the other colonies, be erected at the main shipping ports for the purpose of preparing timber for export.

5. Your committee, although perhaps without its province, beg to suggest that, instead of settling the people on the lands that are well timbered, the Government should select scrub-lands, or those throughout the colony which are treeless. They would then be creating a home market, and thereby stop the wholesale destruction of valuable timber by fire, as is now being done.

W. M. BELL, Chairman.

No. 4 COMMITTEE.—FORESTRY COMMITTEE.

INTERIM REPORT No. 1.

Your committee beg to report as follows:—

1. That, in respect to a close season for felling timber, the Committee is of opinion that this is absolutely impracticable under present conditions. It has been shown to the committee that it would interfere so much with the working of the bushes and mills as to require their stoppage for a great portion of the year, as well as divert the trade from New Zealand to other parts where such restrictions do not exist.

2. That the proposal to “ring” New Zealand trees is not recommended, as experience has shown that it is both costly and injurious to the timber.

Wellington, 20th July, 1896.

D. GOLDIE, Chairman.

INTERIM REPORT No. 2.

Your committee beg to report as follows:—

That it is important to conserve the forests from immediate destruction, submitting them for sale only as the requirements of the trade make it necessary, giving ample time before sale for a proper examination of such forests.

That forests on land suitable for settlement should be first disposed of, a reasonable time being given for the removal of the timber.

That in all disposal of forests for sawmilling the timber only should be offered, according to an estimated quantity and at an upset price.

That where timber is offered on lands not suitable for settlement, ample time in every case be allowed for its removal.

That in the disposal of forests in the South Island the present system be continued, but with an increased area to each sawmiller.

That, in order to comply with the recommendation in the matter of providing the most efficient and expensive plant and machinery necessary for turning out the timber in the best condition for local use and exportation, all restrictions as to the area of land which sawmillers may hold should be abolished, as it can hardly be expected that they will incur a large expenditure for machinery and plant unless they are allowed to hold large areas of bush-land so as to provide the raw material on which to operate, and so enable them to recoup themselves for the large expenditure thus incurred.

That this committee would recommend to the Government the absolute necessity of preserving to mill-owners all the rights they have acquired over streams and lands necessary to bring their timber to market, and that in any future legislation the interests of the sawmillers in this matter be carefully conserved.

That in all sleepers for Government railways, sawn sleepers be preferred to hewn, thus preventing the enormous waste which takes place in producing the latter.

Wellington, 21st July, 1896.

D. GOLDIE, Chairman.

INTERIM REPORT No. 3.

Your committee beg to report as follows :—

1. That it is desirable to at once commence the planting of lands unfit for agricultural or pastoral purposes, especially in treeless districts, and where native timbers are becoming scarce.
2. That the varieties of trees so planted be limited to those already known to grow satisfactorily in the district, and produce suitable timbers and barks for the requirements of such districts.
3. That experimental grounds be established in such districts for the raising of various trees and for the supply of trees at nominal cost to those wishing to make plantations for timber purposes only.
4. That a qualified practical man be appointed to organize and direct forestry operations in the colony under the Lands Department, and the committee urge that great care should be taken to obtain a really good man.
5. That advice and directions be afforded by Government to assist private planting for forestry purposes.
6. That larger areas of beech or other forests be reserved for climatic purposes, especially in districts where rivers have their sources.
7. That a list of trees suitable for cultivation in New Zealand, compiled by Mr. J. Matthews, is appended. Other lists of suitable trees have been published by the State Forest Department.
8. That black wattle and other suitable trees for tanning purposes be planted on pumice and other suitable lands.
9. That returns be obtained of the present accessible and marketable forest timber in the different districts.
10. That in future appointments to the Land Boards, the committee consider it desirable that persons conversant with the timber industry should not be overlooked.
11. The committee recommends the disuse of the terms "red-pine," "white-pine," and "black-pine," in favour of "rimu," "kahikatea," and "matai," in order to prevent their being confused with timbers having similar common names in Europe. Also that "tooth-leaved-beech," "entire-leaved-beech," "silver-beech," and "mountain-beech," should be used instead of the unmeaning terms "red-birch," "brown-birch," "black-birch," &c.

D. GOLDIE, Chairman.

No. 5 COMMITTEE.

BY-PRODUCTS.

Your committee beg to report as follows :—

1. As regards the production of bark, a close season for cutting timber would seriously affect this industry, as the stripping season commences in October and terminates at end of January. The only barks that are in demand, and can be obtained in commercial quantities, are the black and brown-birch (*Fagus fusca*), sometimes known as the tooth-leaf beech, and the towai and tawhero. We find that these barks have been tested here, and are highly approved for the manufacturing of upper-leather. *Re* haulage of bark, we find the Government are already treating this matter in a liberal spirit.
2. That the Government be requested to place, say, five tons on the London market, through Messrs. Powell, of London, and Messrs. Paul, of Leeds, in order to test its value in the English markets.
3. In regard to tree-planting, the wattle is strongly recommended as suitable for planting in the North Island only, the South Island being unsuitable from its colder climate, the winter frosts killing the trees before they can arrive at the age and size to pay for stripping.
4. *Wood-pulp*.—This industry could not be carried on at a profit under present circumstances. A pulp-mill to make 10 tons of pulp per day would cost, erected in New Zealand, from £30,000 to £40,000, and, as the pulp when manufactured would have to be shipped to foreign markets, where labour and the cost of machinery would be considerably cheaper than here, its manufacture in this colony could only result in a loss.
5. *Sawdust*.—We are pleased to state that the Kauri Company, of Auckland, intend sending Home a quantity of both kauri and kahikatea sawdust to a large pulp-making firm, in order to test its value. We find that the use of sawdust for sanitary and disinfecting purposes is highly recommended.
6. As to the utilisation of one of our waste products, it may be mentioned that the wood-ash from the engines at our mills is now being sought after for the manufacture of potash, and Dr. Levinge is now collecting this material from mills in the Dannevirke district, with the intention of testing its properties, which, if satisfactory, it is proposed to erect suitable plant for the treatment of the crude material.
7. Other secondary products, as charcoal, tar, pitch, lampblack, resin, and turpentine, have been dealt with in an able report by Professor Kirk, and your committee think it unnecessary to refer further to them.

M. LIGHTBAND, Chairman.

PROCEEDINGS.

PROCEEDINGS at a Conference of Delegates representing the Timber Industry of New Zealand, opened at the School-room, Sydney Street, Wellington, on Friday, the 17th July, 1896, at 3.30 p.m.

NAMES OF DELEGATES AND BODIES REPRESENTED.

TIMBER-MERCHANTS AND SAWMILLERS, ETC.

<p>Auckland— Bagnall, L. J., Turua, Thames. Goldie, D., Albert Street. Kauri Timber Company, Customs Street (V. B. Trapp and R. Blair). Leyland and O'Brien, Customs Street. Waitemata Sawmill Company (H. W. Smith). Mitchelson, R. and J., Dargaville.</p> <p>Hawke's Bay— Hawke's Bay Timber Company (Fritz Jenssen). Hawke's Bay Sawmillers' Association (Thomas Baker, Secretary, Dannevirke). Greenaway, W., Frank, Matakawi, Woodville. Carlson, H., Dannevirke. McLeod, D., Hastings. Knight, B. L., Hastings. Tanner, Thomas, Riverslea, Hastings.</p> <p>Wellington— Booth and Co., Carterton. Halley and Ewing, Courtenay Place. Stewart, John (Stewart and Co.), Courtenay Place. Beck, John. Luxford, W. L., and Co., Palmerston North. Sash and Door Company, Palmerston North. Bartholomew, Peter, Levin. Prouse, James (Prouse Brothers), Levin. Gardiner, Charles, and Co., Manakau. Bartholomew Brothers, Feilding. Falkner, A., Eketahuna. Murdoch, J., Awahuri. Manawatu Timber Company (Cornfoot, A.), Halecombe. Falkner and Co., Mangamahoe. Bailey, William L., Upper Taonui. Lowes and Co., Fowler's. Adsett, G., and Co., Pohangina Township. Waddell, McLeod, and Co.</p> <p>Taranaki— Brown, H., and Co., New Plymouth. New Plymouth Sash and Door Company, New Plymouth.</p>	<p>Taranaki—continued. Kennedy, W. L., and Co., Toko, Stratford. Taranaki Sawmillers' Association (W. M. Woodhead, Secretary, Stratford).</p> <p>Nelson— Lightband, Martin. Marris, W. and J., Westport.</p> <p>Westland— McConnon, J., Kumara. Morris, William, Greymouth. Burger, H., Kumara. Malfroy, J. C., and Co., Hokitika. Sawmillers' Association (A. Stevenson, Secretary, Hokitika). Butler, J. (Butler Brothers), Kokiri Mills, Greymouth. Jay, J., and Co., Greymouth. Stratford, Blair, and Co., Greymouth. Perotti, G., Greymouth.</p> <p>Canterbury— Wood and Laurie, 88, Manchester Street, Christchurch. Kerr, T. H., Christchurch. England, R. W., Christchurch. Waller and Son, Christchurch.</p> <p>Marlborough— Brownlee, William (Brownlee and Co.), Havelock. Nees, C., Okarameo. White, Charles, Blenheim, Onamahutu.</p> <p>Otago— McFarlane, John, Tapanui. Matthews, A. J., Dunedin.</p> <p>Southland— Jack, William, Winton. Massey and Co., Esk Street, Invercargill. McCallum, A. (McCallum and Co.), Invercargill. New Zealand Pine Company, Invercargill. McPherson, A. and D., Centre Bush, Invercargill. Mackie, G., Makarewa. Anderson and Malbin, Long Bush.</p>
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BUILDERS.

<p>Auckland—J. J. Payne (Secretary, Builders' Association). Wellington—J. Carmichael. Blenheim—Richard Dickson. Invercargill—C. D. Wilson, of Shaw and McLeod.</p>	<p>Hokitika—W. M. Bell. Greymouth—Charles Seabrook (Arnott and Seabrook). Taranaki—Edward Bulet.</p>
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FOREIGN.

<p>Melbourne—Mr. G. S. Perrin, F.L.S., Victoria.</p>	<p>Hobart—Mr. G. S. Perrin, F.L.S., Victoria.</p>
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MISCELLANEOUS.

<p>Wellington—Professor Kirk, F.L.S. Palmerston North—E. Larcombe. Hokitika—T. Potts.</p>	<p>Upper Plain, Masterton—T. Nettleford. Wellington—L. Coupland. J. Freyberg.</p>
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The Hon. R. J. Seddon, Premier of New Zealand, in opening the proceedings, said: Gentlemen,—You have been called together to deal with one of the most important industries that we have in New Zealand. An industry, the importance of which demands your most serious and careful consideration,—an industry which, to my mind, in the past has been greatly neglected, and it is only now that we are waking up to the fact that unless some steps are taken, steps of a practical character, the result will be detrimental to our country, and extremely prejudicial to those who are interested in the industry. The Government looked upon this industry as so important, that (as you will remember) a paragraph appeared in a Speech from the Throne, stating a conference of those more particularly and directly interested would be called. I must first of all congratulate you, and at the same time thank you very kindly, for having appeared in such numbers, representing as you do the timber industry in all parts of the colony. I feel assured that from the presence of those who are here good will eventually result. I may say that the Government communicated with the Governments of the other colonies, and we asked them to send representatives to this Conference. There is a representative coming from Victoria, who will be here probably on Tuesday next. I am satisfied myself that, if you do justice to the various matters which will be submitted to you, before you have concluded your labours the representative from the other colonies will be with you. I have said that in the past justice had not been done to

our forests, or to our timber industry. If you look back upon the condition of our forests and our timbered lands a few years ago, and if you ask yourself the question to-day, Has any benefit been derived by the country, and the people generally, and those most directly interested in the industry? the answer must be absolutely in the negative. Take first of all the bush lands that have been sold to the settlers. What has been done? Carrying out the old worn-out idea—the bush has been burnt by the thousands of acres. Millions of feet of valuable timber have been burnt never to be replaced. What is the result? Why, the man who reserves his timber, lets it stand, he will get more royalty from the timber than he would for a farm fenced and complete. Well, it is no use us saying too much in respect to the past; we must all admit that mistakes have occurred. Then, again, to those who have been engaged in the industry, what is their position? Why, they have gone on year after year, large sums of money have passed through their hands it is true, they have cut millions and millions of feet of timber; but, as far as they are concerned, there was no margin of profit left, and I have found them very little better off to-day than when I knew them years ago. Well, I simply say that that being the position, it shows that there is something wrong. If it is wrong to the millers, it is wrong to the State, and the State has not been getting that value that it should. Then, again, we take and approach it from another standpoint. Has it done good to those engaged in the timber industry? I allude to the workers, to the mill-hands, to the log-getters. No. The competition has been so keen, everything has been cut down so often, that they have made very little, and they are little better off probably than living during the time they have been engaged in this very hard work. That is the position of the saw-hand. Now I am bringing you to the point: I say it is a matter for colonial concern as to whether this keen competition, this cutting-down of everything without any advantage either to the millers, to the workers, or to the State, whether or not that shall continue. My answer is, No; and you are called together on this occasion, gentlemen, to see whether some steps cannot be devised to remedy this most unfortunate state of affairs. Now I will tell you where the sore spot lies: Whilst mills have been increasing in number, your markets have not increased; it has simply been a question of demand and supply. The supply has been greater than the colonial demand, and you have been competing with each other for the colonial trade. You do no good for yourselves, and you are certainly not profiting the colony. In the meantime, the timber lands of our colony are getting smaller day by day; indeed, that is the unfortunate position in which you are placed. Well, then, the question is: What is the remedy? Gentlemen, the remedy is, as you are engaged in the trade, as your capital is sunk in it, you must have foreign markets: that is the answer. Now, something has been done to assist you in obtaining foreign markets. It has often been said in the past that Governments should not interfere in matters which should be dealt with by commercial men, or men in connection with our industries. We have been told time after time it is not a matter for Government concern, but that those engaged in commerce and industries will settle it for themselves. Well, my experience through life has been this: that what is everybody's concern is no one's concern, and if you trust to everybody, you will find yourselves that no one is doing anything—that is my experience. The State interfered in this respect, that we offered concessions in the way of half-freights to send timber Home to the markets in London. We went further; we sent a trial shipment on our own account. Well, we were unfortunate, first of all, owing to the greater part of the timber being injured by a leakage of tallow. Timber covered with tallow did not commend itself to those in the timber trade at London. We were prejudicially affected owing to the timber being injured by the tallow that escaped in the hold of the vessel. However, it was not all injured. We found ourselves then in competition with others, who knew more than the Government, and private shippers received, I believe, better prices for the kauri timber than the Government obtained. Again, it shows you where there was a conflict. Now, the Government was helping this particular class of timber trade by sending Home the shipments; by the Government doing that, we were calling public attention to it. But the agents, on the part of those engaged in private enterprise, I must say proved too many for those doing business on behalf of the Government. Well, mind you, I do not object to that, because it points out to me this: that if the Government and all engaged co-operate together, and work together, then all will have a corresponding advantage. Now is the opportunity; you are all met here, and the Government desires to have your hearty co-operation. Indicate to the Government how you can be assisted, and I assure you that there will be nothing wanting on the part of the Government to help you to help yourselves. I am convinced, as sure as I stand here addressing you, that, with our valuable timbers in New Zealand, in the quantity we have of it in New Zealand, with its value for building, for furniture, for paving, and other purposes, if we can only get the timber introduced into the markets on the Continent, and to the London market, or British markets—why, I cannot see that instead of working at a loss, as many of you have been doing, instead of having our forests burnt, I believe myself that you will be able to get better prices, and have a demand sufficient for more than you will be able to cut; that is my opinion. It will be surprising to many of you to hear this—namely, that Danish butter will shortly be placed on the London market incased in boxes made from New Zealand white-pine. I remember on one occasion a deputation waiting upon me in reference to this question of white-pine, and I was told that there had been thousands of acres of bush that had been fallen and burnt; and that had there been concessions given that this white-pine would have been taken out and cut, and could have been put upon the then prevailing market in South Australia. Well, as I said, we get wiser as we grow older, and we should not allow a single stick of timber in New Zealand to be burnt or destroyed; and if there are any difficulties in the way that prevent it being got to market at a rate that will give something to those who put it on the market, and to the State which gets the direct benefit in the first instance, I say, gentlemen, you are met here to-day to let us know how this can be done, and we are quite prepared to help you. Then, only recently a market has been opened with the Cape of Good Hope. Little has been done, I admit; but there has been sufficient

done that proves to me, and I am not too sanguine when I say that I believe, that we have at the Cape of Good Hope a market for our New Zealand timbers. We must not do in connection with that trade as has been done in respect to shipments made to other places. First of all, we must know what they require—the class of timber, the way it should be cut, and the way it should be treated—and when we have ascertained that, send the timber accordingly. We ought to have had this information first in respect to the London and Continental markets, and if that had been done the loss that was entailed in respect to the shipment that took place by the Government would not in my opinion have been so heavy as ultimately resulted. However, Mr. Jay has been over to the Cape of Good Hope. I had the pleasure of an interview with him on his return, and he has given valuable information to the Government. I hope to see that information placed at the disposal of those who are here assembled, and from the experience gained by the trial shipment, small as it was, to the Cape of Good Hope, I think we may look forward with hope, gentlemen, to a market being established there for our New Zealand timbers. Then, having dealt with this phase of the question, there is another question which will be opened up at this Conference, and that is in respect to our forests, and the conservation and the prevention of destruction by fire and by being partially cut, and many valuable timbers destroyed or left behind. That is a matter that I hope you will give your serious attention thereto. In respect to this, there is a matter that I wish you also to consider. Probably men engaged in the timber industry may be able to advise us as a Government what we should do. We are sending, as you know, people into the back-blocks as settlers. They go to these back-blocks, and there is no access to the block, except possibly by means of bush-tracks. The unfortunate settler gets there—I am alluding to bush lands—and he commences, of course, indiscriminately to fall the bush. His idea is to get it down—to get the land in grass—and then he is all right. That is the view that is taken. Well, I think myself that there is something wrong there; because that same land—or the value of the timber upon that land—is much more valuable than the land on which he has had the timber burnt, sown in grass, and fenced. The question is, again, whether the Government, under our improved-farm settlements, should actually render assistance. We enforce improvements—we force the settler to do this—nay, we render him financial assistance while he is doing it.

A Delegate: Why put them there at all?

The Premier: If they were not there, I am afraid you would not have the sawmills in swing. If we did not encourage our settlers, there would be no sawmills, and there would be very few of you here to-day. I will take for an instance the Waimarino Block. If there was some means by which the timber could be logged, instead of the settlers simply going in and falling it, and waiting for the summer to come to burn it—if we assisted them in laying tramways to get out the logs, we would give an advantage to the settlers, because they would get the cash for what, at the present time, proved of great trouble in burning and reducing to ashes, and it stands in his way. I think myself that there are many of you here who could assist the Government. This matter has been thought over when we started the farm-association system. We feel that many of our good forests have been destroyed. At the same time, we feel that, while promoting settlement, and getting the settlers on the land, we are putting them there under such conditions that the State gets from those lands large returns, and those returns would ultimately place the land in a much better position than we find them at the present time. There are some parts where that could be done. I can assure you that I would sooner help the settler to get out the logs to insure that they would be put on the market and used, than to have a slur cast upon the colony by the indiscriminate felling and burning of our valuable timbers, and for which future generations will blame us. If we put all this timber on the market, and give all these facilities, unless we have all our own markets extended, we are simply landing you in a worse position than we find you to-day. The first matter you must deal with, and which I say is the crux of the whole thing, is to extend our markets. Now, I suppose I am not asking too much when I suggest that the matter might be taken into consideration by those present. Suppose you come to denude our forests, it is a matter of great moment to the future of the country. You might at the same time probably suggest some means of replacing by planting; you might advise what timbers—what trees could be planted, what timbers are the quickest of growth, and what most suitable and most profitable for our market within the colony. I would commend that matter to your serious attention, and ask you to advise the Government before you separate in respect of forestry and tree-planting. Now I come to another question, and that is, the timber for building purposes—namely, furniture and fretwork within the colony. I have been in places myself, and I see gentlemen here at present who will bear out what I say, that you would find a tree growing in the morning, and in the evening it formed part of a substantial building in a township. Very well, there is only one result of timber-cutting under such circumstances, and this is, particularly when the sap is up, that it requires renewing at a much shorter date than one would otherwise expect. I am sorry to say at the present time that, with many of the sawmillers, their idea is to get the logs in, the timber cut, and on the trucks, and into the market. Well, the result is that it does not do justice to the timber, and it ultimately prejudicially affects those who do it. The question now is in respect to our timber for export, whether you should not have some restriction, because I tell you here plainly that there are those who are engaged in all trades who care not one jot as to the future. They simply look to the present, they want to turn over the money and get rid of the timber, and that is the height of their ambition. Well, as I say, they injure themselves, and they injure others; who say that in the future, if that is carried out, it will result in a general loss all round. The question is whether or not the State might not take steps to prevent its being done. That brings me to a question as to whether or not we should not do what has been followed in older countries, that is, to prevent our trees being felled whilst in full sap. I know, of course, that any sudden change would be prejudicial to the industry. At the same time, I am positive that, unless something is done in the way of stopping the indiscriminate cutting of timber at all seasons of the year, and

more particularly timbers required for furniture and building purposes, that you are doing an injustice to the timber, and you are doing an injustice to yourselves. That is my opinion. How can this best be stopped without unduly and harshly pressing upon those engaged in the industry? A man with capital, he could go and fall it, but it would be unjust to those who have little capital. The only way under these circumstances is for you to suggest some reasonable and some fair way in which something could be done to prevent this felling of the trees when they are in full sap. It is done in other countries, why should it not be done here? You are all crying out and wanting markets. I take it for granted that you want to do justice to yourselves, and if that is the case it is inexpedient for the time being to go on as you have been doing. You will never be any better off, and if you have markets and you send indifferent and sappy timber you will soon lose your trade. For instance, take the timber now that goes to a hot climate: They cut it up in full sap and send it before it is seasoned. What is the result? It works, twists, and shrinks, and as soon as the experts come along they look at it, and they condemn it. Now, timber cut when the sap is down and seasoned will stand anything. We have timber in New Zealand that would stand any heat, and would prove much better than the timbers they have been getting now from the Baltic. Therefore, from this fact alone I would ask you, gentlemen, to consider whether or not you would help us in this direction. A Bill has been framed, and many of you have been communicated with. The Government does not desire to act hastily in the matter, but we do desire to do something, and we take it that your combined wisdom should be able to suggest to us what we should do in respect to this very important question. I am satisfied that, gathered together as you are here from proper and unselfish motives, some good in this respect will come out of the Conference that is now being held. I may say here that this Conference is representative. We have the builders and the joiners represented. Now, I believe myself that the bringing together of the builders, of the sawmillers, and the joiners will tell you of the waste that often takes place in the timber being cut, and cut in such a way that they find themselves at a disadvantage. You may help them, and they will be able to help you. The bringing together of the joiners and the builders with the sawmillers at a Conference of this kind must be, in my opinion, conducive to the welfare of all—that is, the sawmiller, the builder, and the joiner. I suggest that you subdivide and take into consideration under different heads what I have just now suggested so you. To show you the position of the colony, as far as we can arrive at it by calculations, is as follows: The amount of timber exported, hewn, and so on, in 1895 was 38,297,905ft., of a value of £144,892. We have been unable to ascertain the actual quantity of timber that has been cut in the colony, and, therefore, to that extent we are not in a position to put before you and to put before the world the vast amount of timber that is cut, and the importance of the industry from a purely New Zealand standpoint. I hope myself in future to have this rectified. There is scarcely any other industry in the colony but what the State can give returns showing the volume and the value of the industry. We cannot do it in respect to the most important of our industries—that is, the timber industry. However, you will be able amongst yourselves probably to assist the Government in rectifying this error. I would like myself to have a record kept of the whole the timber that is sawn in the colony from year to year, so that we may place that as a return before Parliament, and let it go to the world. I will tell you this, that unless you make the world believe that you are somebody, and that you are doing something, why, they do not think much of you. Our State forests include those for climatic purposes, and comprised on the 31st of March, last, 1,141,778 acres. That is the area of the forest lands in the colony. Well, I hope we shall move in the direction of extending our markets, as it is our bounden duty, I think, to make the most of what is left; and, though many of you have been working for years with very little good for yourselves, and not much good for those who are working for you, and the State, if anything, getting the best of it, with the small area, comparatively speaking, that is left we should make the best of it, and for that purpose, gentlemen, you are called together, and I hope you will assist us. I think there is nothing further for me to add in opening the proceedings, than to say, that in matters of this kind it is for the Government, I take it, to lead. Every convenience will be placed at your command, the necessary officers will be here to assist you, and I wish to have your proceedings fully reported so that we may give to the world in full what transpires. I also beg to inform you that whatever transpires here will be fully reported, and we shall print it at the Government expense. We had a Conference here in respect to fruit-culture, and I may say that very valuable papers were read, discussions of an important character took place, and all these were reported and published. The whole of the fruit-growers of the colony and those engaged in agricultural pursuits who were unable to attend had the advantage of the wisdom and of the experience of those who attended the Conference. Though the colony is well represented by the sixty-seven or sixty-eight gentlemen who are here to-day, there are many others who are equally interested, but who are not present, and the only way that we can help them and help the colony is by giving the fullest publicity to your proceedings. That, gentlemen, shall be done. You then, if I might suggest, would do well if you would subdivide the work, and appoint Committees to deal with the several subjects; take, for instance, first, in regard to your outward markets, the extension of markets under the head of exportation; select a sub-committee to deal with that question; let one delegate be selected from that sub-committee to bring forward a paper on the export of timber from the colony, and the markets and probability of markets for that timber. That comes forward in the way of a paper read by the chairman of the sub-committee, and on that discussion will be evoked. You must have some one to commence. I make this suggestion to you because I believe it will facilitate business, and be a practical way of bringing before the Conference itself the information in respect to exportation, and to the increasing of the markets outside. Then you take the Forestry Department, and the prevention of the destruction of forests, and the preservation of forests, make that another subdivision, and appoint a sub-committee whose

business will be to bring that in a condensed form before the Conference. Then you take what is very important to you, and I suppose will be really taken by those present as being of first import, and that will be milling in the colony. Deal with this phase of the question in the different parts represented, and then compare notes as to what they are doing, the prices they are paying, the prices they are receiving, and other circumstances more particularly connected with that branch. These gentlemen will bring their report before you, and I have no doubt that will evoke the fullest and probably the most discussion at the hands of the Conference, as really that affects every one of us present, and more directly than anything else. That is the suggestion that I throw out to you which you ought to do. Then, as regards the timber, the builders, and the joiners, and the supplying of your own markets within New Zealand. You will appoint a sub-committee for that; and I think that the four sub-committees dealing with these several branches, and with papers read upon these subjects, will be an advantage to you, and will help you greatly to shorten your proceedings. The Government have arranged for Professor Kirk to be here in respect to our forestry and our tree-planting, and what we are to do in the future in that respect. I anticipate he will be only too pleased to read a paper to you on the subject, and to render you every assistance. I have asked him to be present here as the representative of the Government, and to devote special attention to that branch of our timber industry. In conclusion, gentlemen, I desire to state that I shall recommend the Conference to appoint Mr. Trapp as president, and for the reasons that I shall shortly give to you. As you are aware, he is the head of the largest timber company doing business in the colony—not only doing business in the colony, but in the neighbouring colony of Victoria, with markets on the Continent and in the Old Country—and, knowing that to be his position, I asked him to remain in the colony, before leaving for Victoria a fortnight ago, to assist the Government and the Conference with information which I consider of valuable character to be placed before you. Under these circumstances I think he would make a very worthy president, and help you very materially with the important business that you have to transact. To show you the importance of the industry and the company with which he is connected, the number of hands employed now amount to between four thousand and five thousand. They have about twelve mills at work. The amount of wages paid last year was over £200,000, and the output of timber was over 43,000,000ft. The export of this amounted altogether to about 25,000,000ft. These are facts, gentlemen, which will show you that this particular branch of our timber industry is growing when you find one company with this output, with this number of hands employed, and with the advantages already of foreign markets. I think that I have not unduly trespassed upon your time. I heartily thank you for your attendance; and, in conclusion, move that Mr. Trapp be the President of this Conference.

On the motion of *Mr. T. Tanner*, seconded by *Mr. Cornfoot*, a hearty vote of thanks was accorded to the Premier.

The Premier, in reply, said, I thank you gentlemen, very heartily for the vote of thanks you have accorded me, and I can assure you that my only desire is to promote your well-being and the advancement of the timber industry, and at the same time to assist in furthering one of the most valuable industries in the colony.

ELECTION OF PRESIDENT.

Mr. V. B. Trapp was proposed for the position of president. This was seconded by *Mr. D. Goldie*, Auckland, and carried unanimously.

Mr. Trapp thanked the members of the Conference for the honour they had conferred upon him, but suggested that Mr. L. J. Bagnall, of the Thames, should be appointed in his place, as, owing to his long experience in timber matters, he was more qualified for the office.

It was pointed out that Mr. Trapp having been already elected president it was too late for him to suggest another person to fill that office; and it was decided, on Mr. Trapp stating he might have to be absent to attend on committees of the House, that Mr. Bagnall should take the chair at the meetings of the Conference.

Mr. Bagnall was unanimously elected vice-president.

TELEGRAMS.

The following telegrams received by the Hon. R. J. Seddon, Premier, were read by Mr. A. M. Smith, Secretary to the Conference:—

Hon. the Premier, Wellington, New Zealand. (Melbourne, 15th.)
TIMBER Conference. Mr. Perrin, our representative, sails to-day, per "Waihora," from Sydney.

GEORGE TURNER, Premier.

Hon. the Premier, Wellington. (Sydney.)
MUCH regret could not make arrangements to send delegate to Timber Trade Conference. Please send copy of report when published.

Hon. the Premier of New Zealand, Wellington. (Brisbane, 16th.)
REGRET not sufficient time before date fixed for meeting of proposed Conference, re timber industry, to enable arrangements to be made for attendance of representatives from Queensland.

HUGH M. NELSON.

Hon. the Premier, Wellington, New Zealand. (Hobart, 15th.)
VICTORIAN Government approve Mr. Perrin's acting as Tasmanian delegate, Timber Conference. Mr. Perrin so appointed, subject his consent to act.

E. BRADDON.

Hon. the Premier, Wellington. (Adelaide, 10th.)
SORRY we cannot send delegate to Timber Conference. Our Conservator of Forests is out of town, and our timber interests are insignificant compared with yours; but we should have liked; if possible, to have sent delegate, out of respect for your courteous invitation, for which we thank you.

C. C. KINGSTON, Premier.

Hon. the Premier, Wellington. (Perth, 18th.)
REGRET cannot see our way to send delegate to proposed Conference on the timber trade. I shall, however, be glad to receive copy of proceedings and conclusions arrived at.

JNO. FORREST, Premier.

ORDER OF REFERENCE.

On the motion of *Mr. L. J. Bagnell*, seconded by *Mr. D. Goldie*, the following subjects suggested by the Premier for consideration by the Conference were agreed to:—

- (1.) Exportation to foreign markets: Intercolonial, British, British dependencies, and foreign markets.
- (2.) Sawmilling and local markets.
- (3.) Building and cutting; builders' and joiners' timber for building and furniture purposes within the colony.
- (4.) Forestry; prevention of destruction; cutting of timber within certain seasons; and planting of timber.

The Hon. R. J. Seddon, Premier, suggested taking the names of those present, and the timbers they represented. Then they could arrange who were to go on these four subdivision committees.—Agreed to.

On the proposal of *Mr. T. Tanner* it was agreed that the Conference adjourn till 9.30 a.m. on Saturday.

The Conference adjourned at 5 p.m.

SATURDAY, 18TH JULY, 1896.

The Conference resumed at 9.30 a.m.

Mr. V. B. Trapp, manager of the Kauri Timber Company: Mr. Chairman and gentlemen,—In thanking the Premier for calling this meeting, I might state that I think the results will be beneficial to the whole of the timber industry of New Zealand, and I trust that all questions of importance will be thoroughly discussed, not so as to benefit one section, but for the mutual benefit of all those who are producing timber. You are all aware that for a long time past the timber milling industry has been dead, which is most regrettable, as no body of men work harder and have more to contend against than the producers of this article, and it seems a pity that the forests should be cut, and afterwards no one to benefit from the hard work of the sawmillers. To give you some idea of what this timber industry means to the colony, I will inform you of the ramifications, and also quote figures so that you might the more easily understand the position of the trade at the present time. You might say it is all labour, and employs more hands than perhaps the next two industries. No one can tell how far-reaching it is, and it benefits all classes. We will start first with the log-getters. In any district where there are bushes you will find a number of hands getting the logs have small holdings of their own, and during a certain part of the year earn good wages at getting this timber, and then turn, in proper season, to their small farms, and are able to make improvements, which, without the help of this timber industry, they could not possibly do. In the North, amongst the kauri forests, we occasionally have men coming to us who have perhaps 200 or 300 acres of their own, with perhaps 50,000ft. to 100,000ft. of standing kauri. They wish, and at times make, the following arrangement: We buy their timber from them at a certain price delivered into a creek or river, and we may sell them 200 or 300 acres of land with 300,000ft. or 400,000ft. of our own timber upon it, letting them have the contract for taking off our timber at the same time as they are cutting theirs. This enables them to have a very fair-sized holding, and the money they make from selling us their timber and contracting for ours enables them to live and to clear their own sections without loss to themselves. It is a well-known fact that as soon as the milling industry starts in any one district, that district is sure to improve. We will then go to the number of ships and scows which are constantly being built in Auckland for carrying this timber. I have a return made out of the number of voyages made by the various vessels owned in New Zealand, and shipments of timber by the various boats to and from the different ports in New Zealand, which will give you some idea of the magnitude of this industry in the way of providing work for seamen and others. I should estimate, amongst all these vessels, they must employ one thousand five hundred to two thousand hands. If you then take the number of mill-hands, engineers, and log-getters, and those that have to help them, it is enormous. Shipwrights, dray-makers, and others have to thank the timber industry for a lot of work. It may interest you to know what the Kauri Company have paid in the Auckland District during the last three years for labour, salaries, and log-getting, rates, taxes, telegrams, and railway-freights: For the year ending the 30th April, 1894, £131,321 10s. 3d.; for the year ending the 30th April, 1895, £148,876 15s. 5d.; for the year ending the 30th April, 1896, £211,674 4s. 1d.: total for three years, £491,872 9s. 9d. You might safely add to this another £35,000 per year paid to locally-owned vessels and scows. At the present time we are loading eight or nine vessels per year for the European and foreign markets; and each of these vessels must leave between £500 and £600 at the loading ports for provisions, labour in stowing the cargo, towage, pilotage, and other dues. I have given you these figures simply to show you how wrong it would be for any adverse legislation to injure this huge industry; and, as you repeatedly read communications from various parts of the colony about a law to be passed for cutting the timber in a certain season, or ring-barking it, or doing something else with it, I trust that this Conference will come to some definite understanding in connection with this for the future, as it will not do for a few individuals to try and force a Bill through Parliament which must be detrimental to the whole timber industry of New Zealand. So far, this industry has been perhaps the only one that has not been fostered in any way by any Government. I think you will all agree with me when I state that it is in no need of help from the Government so long as they do not listen to a few, who are really men wishing positions in the Government service. I now touch on a point which is most important, and I trust you will kindly hear me upon it before passing judgment, as it will be

discussed, and I trust fully, before the Conference breaks up. In my own business in Australia I import timbers from almost all parts of the world, and have been a great loser in some instances by the way in which shipments have been made of your timber to Australia. I refer to the way the timber has been produced and shipped. It has been nothing else than slaughter. I think there are enough of you here to come to some arrangement about the milling of your timber. The discussion afterwards will be, I trust, of considerable benefit to us all. We have now, through the foresight of the Premier, a chance which may not occur again for a long time. You may think there may be some excuse for the way in which this timber is milled. Speaking from an importer's point of view, I state without any hesitation it has brought losses upon not only the millers but most severe ones upon the importers and those who manufacture timber into boxes, furniture, &c. It has been unsatisfactory to all. With kauri it has not been so bad, yet, at times, we have had very severe complaints. At the present time we have an association amongst the kauri-millers, which I am pleased to state has almost completely stopped the bad milling and slaughter of this wood. I am now going to speak my mind in connection with the white-pine, a wood which I am morally certain will rise rapidly in price. Up till now it has been a disgrace to those interested in this wood. It has been most disheartening to those who have dealt with this wood to go on the Melbourne wharf and see a cargo from some firm landing alongside cargoes from others. One of them bright, clean, with hardly a blemish, and the others black, stained, gum-veins badly cut, and I most firmly believe every defect possible. The reason you might all state is unhealthy competition; this is not so, for you can get more money in the market for well-manufactured than any other. The result of these cargoes landing in this terrible condition is this: Buyers refuse to take delivery, and being cut chiefly for butter-box material it is useless for almost any other purpose, and as the stain from sweat goes right through the wood it is impossible to plane it out. The consequence is it must be sold at a sacrifice, for if kept dry-rot starts almost immediately, and the timber is worthless. Had the timber been landed bright and clean, the buyers would have taken delivery and prices maintained; but when this damaged, sweated, and stained timber is made into butter-boxes, they smell mouldy and are rejected by the various factories. I could show you in Melbourne many hundreds of boxes returned, and thrown upon the hands of the butter-box manufacturer. Just casually looking at these you would notice a slight discolouration, but on smelling them you will find they are perfectly musty, and are turning as black as your hat. It is bad for yourselves, but worse for the people that receive it. The Thames District is the only district in which the white-pine arrives in Melbourne in anything like condition. As far as Greymouth is concerned, I feel sorry for them—they say they have not got the means to dry it, although the quality of the timber is really good. The factories now are so very particular, as so much butter went away in boxes made from damaged timber, that bitter complaints came from the English market, and constantly telegrams appeared stating some of the butter by such and such a steamer was mouldy, or musty, owing to unseasoned and damaged timber being used in the boxes. White-pine, we all know, is a most treacherous wood, and must be seasoned before shipment, and should also be shipped in dry weather, and not during the rain. They should stack it certainly three months before being shipped, and if this Conference is to do good to the white-pine industry, it should try to regulate the price for shipment, and also see no timber is shipped unless properly seasoned and milled. The milling of this timber has also been bad. In many instances you will find a board three-quarters of an inch thick at one end, and an inch and one-eighth at the other, or 12in. wide at one end, and it may be 11in. or 13in. at the other. It has got so bad in Melbourne that they are now compelling us to use gauges, and rejecting all that which does not stand up to the size. We had one instance in Sydney of this in which the Customs authorities saw the timber at one end of the board was thicker than the other, and made a claim for the excess, and, what with the captain of the ship following suit, £35 had to be paid in duties and freight on the cargo more than the timber the importers received. It is the only wood which can be used for butter-boxes, and, when properly prepared, there is little or no risk of sweat or damage taking place. We are all aware it shrinks more than any other timber, so when being milled it should be cut full, not only for the butter-box making, but for all other purposes. As the butter export must extend yearly, the consumption of this wood must increase. The day is not far distant when it will be used for shelving, and many other purposes. It has already interfered with the imports of American shelving very considerably indeed. I ask you for the sake of New Zealand to pay every attention to the milling and seasoning of your timber. I do not wish to boast, but, if proper attention were paid, the price would certainly rise to 7s. if not 7s. 6d. per 100ft., and I think you would see this realised within the next twelve to eighteen months. If you put your heads together, I do not say or even hint at forming a ring, but to regulate the supply, and to see that the timber is faithfully shipped, you will obtain the price mentioned above, and get a fair return for the money, trouble, and anxiety spent upon it. Kauri is the best wood in the world; there is no other which can be used for so many different purposes, and, at the same time, be the leading one in each different use it is put to. I am very pleased to state the milling has improved very much of late. I think this is entirely due to the association of kauri-millers, who are all endeavouring to keep it in its present good position. This wood is not like white-pine, it does not sweat except when the sap-timber is shipped straight from the saws. Owing to the position taken by the association, we have stopped sending any forward unless seasoned on this side, and the benefits we have received in price more than pay for the expense of this extra seasoning, and we are free from all claims in Australia "on account of damage," which in the past was a severe item. This wood was a little time ago sent to London for wood pavement. I think it was most cruel, and most injudicious, and might have had a serious affect upon its future. For people, looking upon it as a timber-paving wood, are apt to forget that it is the best wood for furniture, carving, ship-building, and for a variety of other works. I am certain it will take a position amongst the best, if not the premier position, of all woods in the English market. To bring it to the level of the common hard-woods,

and Baltic deals was disgraceful, although I admit it is wonderfully adapted for the purpose ; but its position, is far and away ahead of it. I cannot touch on rimu, totara, birch, &c., for I have had no experience, and I would ask those present to give us all the information possible, so as to be useful to us in the future. I have noticed several articles recommending the Government to pass an Act to have timber felled during a certain season ; and, if not that, to have it ring-barked when the sap is down. I am sure the majority of the millers will agree with me when I state it is a faddist's idea, and could not possibly work. We have in the Kauri Timber Company certain bushes, which we call summer bushes or winter bushes, and nothing would make us cut our summer bush in winter, and *vice versa*. In those bushes it is impossible to work at different parts of the year. If a law were passed, and inspectors appointed to see this was done, a great many of the smaller mills would undoubtedly have to collapse, and I do not think the advantages would be felt at all as to the quality of the timber produced. I would ask the southern millers to put their own views before this Conference, as the northern millers undoubtedly object to anybody interfering with the time we cut the timber ; in fact, we could not do it differently to what has been the rule since kauri was first used in New Zealand. In certain districts, the timber is better adapted for different purposes ; for instance, in joinery-timber, everybody likes Mercury Bay and Tairua, yet for flooring and general work that from Kaipara is considered its equal. It may be that down south ring-barking and cutting at a certain time would be beneficial. We must take the views of those who have had vast experience in it. All over the world, from where they ship timber, they are considering tree-planting ; but in Norway the trees grow so quickly that it makes little or no difference, as they are constantly replanting their forests. In America they are not doing so ; and, as it is impossible for anybody to hope to plant kauri, some other wood should, if it is thought desirable, be agreed upon. Ash, hickory, and elm would be about the best ; still, it may be that the Baltic pine would thrive wonderfully well ; and I would almost go so far as to recommend the Government to appoint a gentleman to look after the forestry business, and to go thoroughly into the question, and see if by some means a quickly-growing timber for building purposes could be introduced. If we can get foreign markets, the timber industry in New Zealand is bound to go ahead ; but, in getting foreign markets, you must mill quite as well as the markets which you have to trade against. I do not think the Government should be asked to interfere. It is a purely mercantile speculation, and should most certainly be carried on by business people. I am against rushing to the Government for assistance to send any new article away to try and make a market. In kauri, our company has lost heavily in trying to get the wood on foreign markets. I think now it is being fairly well introduced, and will, at some future date, recoup us for the heavy losses made previously. All Australian woods are being brought into prominence in the United Kingdom and the Continent. It is done by slowly and gradually working them in. I do not think the Government could do it nearly so well as private enterprise. I refer to the shipment of kauri sent by the Government to London. It did them no good, and did our company a considerable amount of harm. The Premier kindly made a remark that we knew too much for them. We were getting a fair price, and they knocked it down to a price that did not pay us. We have found out private enterprise is far more satisfactory. There is, no doubt, a splendid market in Europe for New Zealand timbers. I think you would get them into France. I am sending some at the present time there. I think you will get white-pine into Copenhagen. The reason for stating this is a very good one, the wood is absolutely clean. At the present time they lose a certain amount of butter on account of the wood they use. Now, the price of the butter lost is more than the cost of the boxes. Even if you were to pay the freight, at 7s. or 8s. per hundred Home, if you want to get the foreign markets you must pay attention to the milling. I would strongly urge the Conference to have a subscription made by the various millers for what are practically unknown woods in Europe, so that they may send moderate parcels forward, and have them sold at the best prices obtainable. There may be a loss on the first few shipments, but afterwards they will get their prices, and it will lead to a large and extending business ; but, to think that you are going to send large cargoes of stuff away without the timber being known, and to make good profits, is simply absurd. In the French market there is a splendid opening for the white-pine and rimu, but the trouble is getting it there. The only way I can see is to send it moderately across for transshipment from an Australian port. If such woods as rimu and rewarewa were sent forward and properly introduced, it must benefit the milling industry ; but I would strongly urge and recommend this Conference to ask the Government to allow it to be done by private enterprise instead of their interfering, as it would only lose money for themselves. If we are going to make the milling industry prosper, we will have to sink all differences, or we might just as well not have the Conference at all. It is no use in the way you are doing it at the present time : you will only kill it. It is certainly a fact that last year, in wages, and rates, and taxes, our company paid over £211,674. You can imagine the number of hands that are kept going, not only in the mills, but in the bushes. Then, take the number of people dependent upon them, and helping these. I think there are several woods that could be grown, and grown quickly, and valuable woods, too. They have been tried, and are doing well. I would like it to be gone into in an even and quiet spirit. If any one class of miller is going against the other to further certain ends we will never do any good. Gentlemen, I would ask you now to allow Mr. Bagnall to take my position as chairman of this Conference, as he understands more about it than I do.

Mr. T. Tanner (Hawke's Bay) : I think that there should be a fund, which would give some guarantee to those who are willing to send their timber Home. I think, Mr. Trapp, this is about perhaps one of the best ways of inducing us to join together and temporarily put the timber upon the English and foreign markets until it is taken up. The industry is so important to this country that I feel satisfied that the whole of the export alone, if we can only get it upon the English market, will be second only to wool.

Mr. L. J. Bagnall (Turua, Thames), vice-president: Gentlemen,—Mr. Trapp has spoken of the various matters which will be dealt with, and I think it would be promoting the progress of the business if we proceed at once to get done as quickly as possible. The various matters have been put under the various headings, and possibly it may be found necessary to amend or extend these various matters, or take in matters which may be considered relating to the different headings. It is proposed to form four committees,—one to consider the exportation to foreign markets; inter-colonial, British, British dependencies, foreign markets; and railway tariff for export: the second for sawmilling and local markets: the third for building and cutting; builders' and joiners' timber for building and furniture purposes (to be called the Timber Selection Committee): the fourth, the Forestry Committee, for the prevention of destruction and cutting of timber within certain seasons; and planting timber. There is one item that does not come under any of the headings, and that is in regard to barks for tanning purposes. There is a gentleman here who is interested in this; and this item is of great interest, for there is a large market suitable for tanning, and if these barks can be turned to profitable account it is an important matter. Mr. Lightband, who is here, would like to communicate information and give his experience with regard to this line. It might be necessary to add another heading, for the consideration of by-products.

Mr. H. J. Matthews (Dunedin) proposed, and *Mr. W. M. Bell* (Hokitika) seconded, That "By-products" be made another heading.—Carried.

AMENDED ORDER OF REFERENCE.

- (1.) Exportation to foreign markets: Intercolonial, British, British dependencies, foreign markets; and railway tariff for export.
- (2.) Sawmilling, local markets, and railway tariff for local markets.
- (3.) Building and cutting, builders' and joiners', timber for building and furniture purposes within the colony.
- (4.) Forestry; prevention of destruction and cutting of timber within certain seasons; and planting of timber.
- (5.) By-products.

The Chairman: The next matter will be the forming of the different committees, and I think it would be as well to determine whether we should fix a limit to the number, or take the names of those desirous of going on these committees.

Mr. Wm. Morris (Westland): With regard to forming these committees, I think we will facilitate this matter considerably by splitting up these committees.

The Chairman: I have been thinking over the matter as to the number that should be on each committee, and if we appoint nine gentlemen on each, considering the interests of the gentlemen present and the districts that we represent, I think that we should appoint this number. We could not very well have representation from each district if we made the number less than that.

Mr. Butler (Westland): Before going into committees, I think it would be best to get the fullest information here. There may be many present who can supply many points, and members should be given a chance to discuss what they know. I have a paper which would give some information.

The Chairman: This is a matter that can come on after we have arranged about the committees. It is impossible for a large meeting to discuss a systematic question until it is brought forward in a proper way. The committees' reports will come up in a proper form, and if you submit your paper to myself or the president, we will see and arrange a time when it will be convenient to give papers, and you will then have an opportunity of rendering yours. The first thing now is to arrange committees.

Mr. Leyland (Auckland): Would it not be as well to ask Mr. Butler to say which branch of the proceedings his paper deals with. We could then decide at what committee it could be discussed.

The Chairman: We must get on with the election of the committees. It has been proposed that the number of members on committees be nine.—Carried.

The Chairman: I think we had better devote a little time to selecting members of committees, so that we may have representatives from the various parts of the colony, and gentlemen who take an interest in the subject upon which they choose to act. We should not put a gentleman on the Foreign Markets committee, who would prefer to be on the Forest Tree Committee, &c. I shall be glad to have the names of the various gentlemen who are willing to act on the committees.

It was agreed that the following gentlemen should serve on the various committees:—

No. 1. Foreign Markets Committee: Messrs. J. Jay, G. Perotti, R. Blair, F. Jenssen, P. Bartholomew, T. Tanner, J. H. Dawson, C. J. Richardson, and T. Nettleford.

No. 2. Local Markets Committee: Messrs. Smith, H. Brown, G. Mackie, W. L. Luxford, W. Morris, A. McCallum, and J. Butler.

No. 3. Timber Selection Committee: Messrs. J. J. Payne, R. Dickson, R. Wood, E. Larcombe, Charles Stewart, John Beck, C. Seabrook, T. H. Kerr, and W. W. Bell.

No. 4. Forestry Committee: Messrs. J. Brown, H. J. Matthews, D. Goldie, W. M. Bell, T. Potts, W. Marris, R. Blair, W. Leyland, J. Prouse, J. C. Malfroy, J. McFarlane, C. White, W. Morris, D. McLeod, and W. Jack.

No. 5. By-products: Messrs. M. Lightband, J. Butler, W. F. Greenaway, R. W. England, W. Edwards, J. Waller, T. Baker, Professor Kirk, and Mr. G. S. Perrin.

The Chairman.] While our Secretary is arranging for rooms where the various committees can meet, it is proposed by Mr. Kerr, and seconded by Mr. Marris, That Mr. J. Butler be allowed to read his paper on the timber trade.—Carried.

Mr. Butler, representing Messrs. Butler Bros., of Kokiri Mills, Greymouth, then read the following paper:—

A FEW SUGGESTIONS ON THE TIMBER TRADE.

Mr. Chairman and gentlemen,—In the following paper a few suggestions are made which are worthy of consideration by the Conference now sitting, and written with the idea of subsequently making influential representation to Parliament for their adoption, should this Conference deem it advisable.

That the trade is not on a sound basis is admitted by all—bitter competition and ruinous prices permeate the whole of it—so much so, that instead of the trade being one of fair remuneration, it is one of worry and high pressure, which exacts its penalties from the retail salesman at one end to the employé at the other. In the case of the sawmiller, he is generally a working employer, who not only takes the place of a labourer by day and a clerk at night, but is forced by the exigencies of trade to look upon Sunday as a day set aside for making necessary repairs. Under these conditions the industry cannot command that respect and dignity to which it is entitled, and to raise it to its proper standard is worthy of the utmost consideration. Extension of trade may assist to relax this strained condition; unfortunately, so far, the attempts made at foreign trade have been somewhat disastrous. The English shipment of general timber, which, taken as a cargo, was a fair sample of what the colony could produce, is proving a decided failure—a small portion only being sold; the remainder, mostly birch, now lying in London unsold. This circumstance is to be deplored, the more so as birch was the timber specially recommended for shipment by the Government, and which was expected, from its peculiar texture, to be the wood-paving timber of the future. It may be probable that had the shipment been properly nursed better results would have been obtained; but the matter stands now as a menace to the contributing millers' finances, and presents itself as a venture not to be repeated under similar circumstances. Since this shipment various trial shipments have been made to the Cape, but, so far, no direct profitable returns have been recorded. Under these circumstances it is apparent that the export trade needs some State assistance and encouragement; and it is suggested that the Government should, for the next year, allow all timber cut for export outside New Zealand to be carried over New Zealand lines at a reduction of 3d. per hundred, and in cases where timber is stacked in Government sheds for seasoning purposes and awaiting shipment, the Government should allow freight account on such parcels to stand over till shipment is made.

The superabundance of the raw material, *i.e.*, growing timber, has always seemed to hold out every prospect of a lucrative employment, and has induced many to invest in sawmilling plant. The moiety aspect has continued to entice enterprising men, till at the present day the colony's capabilities for the production of sawn timber are far in excess of its requirements. It is absolutely necessary that an export trade should be found. This has long since been admitted. When engaging in competition with producers of other countries the millers must enter into a different mode of production to that which has sufficed for local trade; much more extensive outlay is necessary than previously. It will be seen that the bush areas which were of sufficient size to make profitable the erection of a mill for local trade at high prices are not large enough to recoup the miller for the outlay necessary to engage in an export trade. The areas granted by the State under various regulations are quite inadequate. This question calls for earnest consideration, and the Conference should make such representation as will secure some better protection to those engaged in cutting from Crown lands. The conservation of forests, viewed from the position of a sawmiller, savours of restriction, and at first glance would appear antagonistic to his welfare. If taken upon a broad basis, the question of its utility or advantage to the colony should be considered. And then, when we see splendid forests being felled and burnt, the conviction forces itself that forest is rather an encumbrance than otherwise. It may be said that the above-mentioned waste calls for the proposed legislation. Would it not be of more practical advantage to find and foster a market for the timber? Were this done, any legislation for conservation would be unnecessary. The fact that it had a value in the market would of itself be the most effectual means of preventing such waste. The sawmiller cannot be taxed with the destruction of forest, since he merely converts the standing timber into a marketable product. No one can be found who would hope to establish and maintain a large timber industry while preserving the forests in their natural state. One condition must give way to the other; and, if viewed from outside the timber industry, it is for those who have charge of this colony's welfare to determine which should prevail—a flourishing industry supporting thousands of people, or millions of acres of virgin forest, which in its unconverted state is of no value to any one.

While recognising we have vast forests, it must nevertheless be borne in mind that it is the State's duty to prevent unprofitable denudation of forest lands. The happiest solution of this is to find a means to increase the profits rather than to diminish the industry. The wholesale destruction of such valuable timber as silver-pine is much to be deplored, and it is rather an anomaly that while the State contemplates legislating for the conservation of forests, they foster the shameful destruction of much valuable silver-pine by giving a preference for hewn sleepers to the exclusion of sawn ones. Nor can the plea of economy or excellence be advanced by the departments, the very reverse being the actual state of affairs. It is upon such detail questions that much may be done to conserve for their best use the forests of New Zealand. The question of replanting is one which should receive attention, and perhaps much valuable information might be gleaned from countries where the State has found it advantageous to replant. The question seems almost premature for the wooded parts of New Zealand.

An opinion of millers is sought for by the Industries Department in respect of a close season for timber-felling, and a definite decision as to its practicability should be given by this Conference. The conditions under which logging is conducted in New Zealand are different in many ways to other timber-exporting countries where winter's ice and snow or spring floods facilitates rather than impedes bush-work at this particular period of the year. As to the superiority of winter-felled timber from the evergreen trees of New Zealand, there still remains a doubt, and it is questionable

if the Government went to the trouble of branding all winter-felled logs sufficiently to show a brand on each piece cut, that the timber so guaranteed would induce buyers to give any advance over and above summer-cut timber without the distinguishing brand. Restrictions as to felling in certain seasons have never been demanded by the ordinary consumer, and only in some instances have the Government specified it in their conditions of contracts. Admitting the superiority of winter-felled timber, how could the miller cope with the difficulties it presents?—for it would undoubtedly mean a revolution in both plant and the present working-system. It is questionable if the average sawmiller is financially strong enough to store, say, eight months' logs in advance of requirements, and in accumulating this supply it would be somewhat speculative as regards lengths and classes of timber required to be stored. To simply fell the tree and let it remain is out of all reason, for logs so felled, especially kaihikatea, would be unfit for use before the expiry of the close season.

The condition of the trade at present is such that, were stringent measures passed in the direction of a close season, it would crush an industry which otherwise, unrestricted, would probably develop into an enormous and profitable trade.

It is desirable that this Conference should make representations to the Government, pointing out that the proposed legislation in the direction of a close season for felling would be detrimental to the timber industry of the colony; that no special benefit could be accrued by its adoption; also that if it were to become law, unless the private property-holders were brought within the pale of such legislation, it would mean that millers cutting from other than Crown lands could, during the close season, hold such advantages as to exclude all others from business.

The labour legislation of the past years has now sufficiently protected workmen against all chances of injustice, but while these laws are framed the employer has scarcely been recognised, except so far as responsibilities are concerned. It is pleasurable to note the timber industry has been almost free from labour disputes. This may be accounted for as much from the fact that the workmen are aware that their wages are on as liberal a scale as the price of timber will allow, rather than that they are receiving high wages. The question of a minimum wage is now engaging the attention of the Government, which, if it becomes law, would affect all millers as employers. It is evident that if the Government can insist for a certain price being paid for labour it can also insist on an equivalent price being paid for timber. To adjust this it would be necessary to fix a payable price for timber at the mill, and to penalise all millers selling below this rate.

The action of the Government in asking those interested in the timber trade to meet in conference is worthy of all praise, and those interested should not be slow to appreciate such action. It not only affords an opportunity of discussing matters of the future, but also presents an opportunity for adjusting trade conflicts of the present.

Any suggestions made in this paper are not made with the idea of being absolutely definite or inflexible, but if the various matters are discussed and sifted it is probable that, on recommendations being made to the proper quarters, the Government would be pleased to protect and assist an industry which promises in the future to contribute a very large proportion to the colony's entire trade.

On the motion of *Mr. Jay*, seconded by *Mr. Bell*, *Mr. Butler* was accorded a vote of thanks for his interesting paper.

Mr. T. Tanner (Hawke's Bay) suggested that "Railway Tariff for Export" be considered on No. 1 committee, and "Railway Tariff for Local Markets" on No. 2 committee.

The Chairman thought it would be necessary to await the report of the committee, and call a meeting of the Conference for Monday afternoon. The Conference would meet at 2 o'clock, and any reports then ready would be brought up.

The Conference adjourned at 11 a.m.

MONDAY, 20TH JULY, 1896.

The Conference resumed at 2.30 p.m.

Mr. D. Goldie (Auckland) handed in the interim report No. 1 of the Forestry Committee, viz.:—

Your committee beg to report as follows:—

1. That in respect to a close season for felling timber, the committee is of opinion that this is absolutely impracticable under present conditions. It has been shown to the committee that it would interfere so much with the working of the bushes and mills as to require their stoppage for a great portion of the year, as well as divert the trade from New Zealand to other parts where such restrictions do not exist.

2. That the proposal to "ring" New Zealand trees is not recommended, as experience has shown that it is both costly and injurious to the timber.

Wellington, 20th July, 1896.

D. GOLDIE, Chairman.

Mr. Leyland (Auckland) moved the adoption of the report.

The Chairman: The report is in two parts; the first is of the opinion that the close season is impracticable, and the second suggestion is as to ringing the timber. I may say that the committee had a paper of *Mr. Leyland's*, which dealt more particularly with reference to kauri. *Mr. Morris* and *Mr. Malfroy* read short papers with regard to the pines, and the committee, I think, were pretty unanimous in the recommendations that were made in this report.

Mr. T. Tanner (Hawke's Bay): I think there is not much for us left except to congratulate the committee on arriving at a very wise, practical solution of the questions. It would be unnecessary

and impracticable to define any season for cutting timber, and I think, from the resolutions of the members of the Conference present, that it seems that the acquiescence of that report is very unanimous.

While waiting for copies of above report, *Mr. D. Goldie* moved, and it was seconded, That *Mr. Leyland* read his paper to the Conference.—Carried unanimously.

Mr. Leyland's Paper.

Mr. Chairman and gentlemen,—In accordance with your request that I should prepare a short paper upon the "Advisability or otherwise of a close season for felling kauri timber, and upon the question of the conservation of kauri forests," I respectfully beg to submit this short paper, prepared, as you are aware, at very short notice, and without reference to any statistical data.

The figures quoted are based upon the personal knowledge of the writer, and, though only approximate, are within the mark, and may be accepted as a moderate statement of facts that are well known to all those present engaged in the kauri-timber industry.

The reasons specified by those who advocate a close season for felling kauri are that kauri, in common with other timbers, is more valuable, more reliable, and more durable when felled during the winter months, when the sap is supposed to be down, or, as Professor Kirk puts it, "when the sap is not active, and when certain chemical properties are absent from the sap—properties which, it is alleged, have a deteriorating effect upon the ligneous tissues of the timber."

Of course, it would be an act of folly on my part, and possibly construed into an act of impertinence, were I to attempt to controvert the expressed opinions of so high, and so highly-esteemed an authority as Professor Kirk; but I would respectfully submit that, with reference to kauri, in this matter theory and practice do not square or dovetail into each other in that unmistakable manner we have the right to expect were this question of the activity or otherwise of the sap of such vital importance as has been represented. That there are exceptions to the rule laid down is evident, for *Mr. H. Smith*, of the Waitemata Sawmill Company, has brought with him specimens of new growth of kauri wood and kauri blossoms, taken from a tree felled at Coromandel during this present month of July, showing that in the depth of winter the sap is active. But, as it is to the heart of kauri that we look for durability, and as the heart of kauri is so clearly defined and so easily separated from the sap, we may safely conclude that with this timber the season in which it is felled is of little importance.

So far as the writer knows, no complaints from the users of kauri have reached the sawmillers against kauri felled in the summer months; certainly the customers in England have never noticed any difference, and *Mr. Payne*, the secretary of the Auckland Builders' Association, when asked this week if he could distinguish any difference between winter- and summer-felled kauri, replied in the negative.

But leaving this moot point and coming to practical every-day experience, I submit that a close season for felling kauri is impossible, and from the many reasons that this is so I will select the following:—

The nature of the kauri country and its topography is so varied that, while some of the bushes can only be worked in winter, there are others that can only be worked in summer. Almost every watershed presents a new problem to the bush-manager or contractor; in some cases, as at Tairua, the logs have to be driven forty miles before they reach tidal-water. It will readily be seen that operations of this character must be worked systematically and continuously. To carry on this work intermittently by seasons would involve very heavy losses, quite apart from any depreciation of timber, and yet the loss from depreciation alone would be so great that a close season would mean closed mills.

As I have not the necessary *data* at hand which would enable me to deal with the loss from such depreciation on the total annual sawn output of kauri, I will try and illustrate the effect of a close season by dealing with the sawn output of the mills situated in Auckland City only.

The annual sawn output of kauri for the Auckland City mills is about 26,000,000 superficial feet. Now, if the felling of this timber is to be confined to one portion of the year only, quite one-half of the sap would be wormed and discoloured, and a large proportion of the sap would be lost entirely; this would mean a depreciation of at least 2s. per 100 superficial feet, or, say, a loss to the Auckland millers only of £13,000. Now, those who know most about this business will admit that this means the difference between a profit and a loss; a loss of £13,000 annually would be fatal to the timber industry of any city in New Zealand. This, however, would only be a portion of the loss. To this loss would have to be added interest on increased capital necessary to enable sawmillers to hold double stocks. Then, we shall have to add the heavy loss which would be entailed by the loss of the trade in medium kauri. This class of kauri is converted from the green sap when free from worm. There is a large demand for this class of timber, locally, in Australia, and in the South Sea Islands, where it competes successfully with American timbers, whilst first-class kauri, too good and too expensive for many of their requirements, is always in urgent demand elsewhere.

Then, supposing we had a close season for felling kauri, what are we to do with our bushmen? We should have to discharge them, and when the felling season arrived again where should we find them? Could we expect them to wait around patiently until we were ready for them? Would they not have drifted into other avenues of employment, and who could blame them? And it is quite certain that no bush contractor would undertake contracts on such conditions. Then, again, we should have to add to these losses the loss of trade connection, which would inevitably follow inability to execute orders, owing to want of logs. Thus would an important industry be wrecked, an industry that is at present in a fairly prosperous condition—a condition that has been brought about chiefly by the continuous and persistent efforts of those engaged in the trade.

Let us for a moment look at another phase of the loss the country would sustain by the enforcement of a close season. The present price of kauri logs delivered to mill-booms, Auckland, is 6s. 6d. per 100ft. super. If we allow 1s. 6d. for royalty and profit to contractors, we may safely say that the remaining 5s. represents wages paid; so that the wages paid on 13,000,000ft., or one-half of the logs cut in Auckland City only, would be £32,500, and this before the logs are brought into the mills. In the subsequent manipulation of this timber—that is sawing, resawing, stacking, planing, matching, and running into mouldings, &c.—another 4s. per 100ft. super. would probably be spent, or, say, another £26,000 lost to wage-earners.

The disastrous and far-reaching effects of the proposed close season, if enforced, would be such that it is evident that those who have proposed this scheme have not given it that consideration which it deserved. I will venture to state that no practical sawmiller in the North would have entertained the idea seriously for one minute; and I think that most of the gentlemen forming this Conference will agree with me that, while we hail with pleasure the evidences of the interest the Government are taking in the industries of the country, and the timber industry in particular, it is unfortunate that so-called experts, who do not hesitate to make the most random assertions, should have got the ear of the Government in this manner.

There has, in some of the reports on our New Zealand timbers, been too much looseness of assumption and too little verification; an important axiom has been lost sight of, “that the quality of the knowledge brought to bear upon any subject is of vastly more importance than the quantity.”

With reference to the conservation of our kauri forests I must be brief. I cannot pose as an authority. I am of the opinion that, in spite of all we can do—and I say it with regret—they are doomed. If we refrain from felling, it will only postpone for a time the day when the kauri forests will be a matter of history only. I should like to find that I am in error; but their risk of destruction by fire is increasing every day just in proportion as the population increases, and it is going to increase in the North very quickly. I have heard Mr. Gerhard Mueller, the Crown Lands Commissioner for Auckland, on more than one occasion state that, as soon as civilisation approached a kauri forest, whether in the form of gum-digger or gold-miner, that forest was doomed.

It has been said that “a large kauri forest is one of the grandest sights to be found in the entire range of the vegetable kingdom.” If this is true—and I believe it is so—then there can be no sadder nor more depressing sight than such a forest after being devastated by fire. I have witnessed no calamity—apart from the loss of human life—so sad as this. After the Tarawera eruption the saddest sight—not even excepting the half-buried village of Wairoa—was the ruin and disfigurement of a once exceptionally beautiful forest. And here I wish to state that a close season for felling kauri will facilitate bush-fires. It is to the bushmen’s and to the sawmillers’ interests that the bush should not be destroyed by fire, while the gum-diggers’ interests lie in the opposite direction. The State has suffered enormous losses by these fires. In the State forest reserve near Whangamata 16,000,000ft. have been burnt, and last summer the remaining green timber on this reserve would have been burnt had it not been for the strenuous exertions of some forty bushmen who happened to be working there, whilst the contractor had great difficulty in getting the authorities to send police to arrest one gum-digger who was seen to fire the bush, and who had no right there at all, according to law. The losses from fire in the Auckland Province last summer were very heavy, the Government, in common with others, suffering very heavily, though the Government Rangers in the Puhī Puhī forest succeeded in saving large portions of this forest from destruction. One thing is certain, that any attempt to conserve our kauri by State regulation of the kauri-timber industry will fail; but if this Conference can suggest or formulate any scheme whereby we can conserve this and the other magnificent timbers of the colony, it will not have been held in vain.

Mr. G. Mackay (Southland): Mr. Chairman, I should like to make a few remarks. There seems to me a general consensus of opinion that the close season for felling timber is a practical commercial subject, and an impossibility in fact. It seems to me that the fact of the Government seriously recommending such a thing is ample justification for our appearance here. Beyond that, Sir, there is a venerable idea that timber which is felled in the winter is, in some way, not very well defined, superior to timber felled in the summer months. I submit there is no sound authority which is conclusive on this subject. I come now to some experiments that I myself went through some considerable time ago. The timber experimented on was New Zealand rata. The way in which I proceeded was this: I went to a certain part of the bush, and I wanted to decide for myself what was the best possible way in which to prepare timber for making wheel-cogs. I felled a few logs in the winter time in the snow, and I took those logs to the mill and cut them into planking. I went to the same place in the summer time, and I felled several trees there, as near as I could judge, similar trees of similar size. I cut them at the mill in the same way, and I was particular in both cases to season the timber on end, which I consider is the best way to commence the seasoning of timber for particular purposes. After two or three months I tested the two timbers together, and I found that which was felled in the summer time was very much superior indeed to that which was felled in the winter. That felled in the winter time was much lighter than that felled in the summer, which was harder. I distinctly think that the pine which is felled in the summer time with a full sap is better than that which is felled in the winter in a dormant condition.

Mr. Richardson (Southland): In the South our experience of this question of the close season is rather different from the North. All our bushes in the South consist of mixed timber. A great many of our orders—I think we might safely say 75 per cent.—are for mixed timbers. Nearly every house built in the South includes both red and black-pine and totara. Suppose you had to fell all your timber, and left it lying on the ground, and you had a mixed order. How in the world are you going to execute that order, and pick out the mixed logs? It would be impossible if you got a mixed order. It might be two months before you could execute it. Suppose, again, you got an order giving a special length, and you had to go hunting through the bush to get that special

length, it would be a total impossibility to execute that order. Our mixed pine bushes in the South would even be more difficult to work than the kauri bushes here in the North. It would add immensely to the expense. I think that it would not be an exaggeration to say that it would add considerably near, if not more than, 50 per cent. It would simply ruin the sawmilling trade, and, further than that, the local trade. I really do not see why the Government should urge the sawmillers to season their timber at all. Suppose a man is building a house, and he wants to put seasoned timber into the house, what is there to hinder him giving his order six months before he is going to erect that house? Why should sawmillers be expected to do it? How can a sawmiller season his timber for six or twelve months in advance? If the man wants seasoned timber, then why should he not season it himself six months before he wishes to build.

Mr. Jay (Westland): Several gentlemen here present would be very glad indeed to hear Mr. Potts. I think if he was to give us his own experience it would be of very great interest to those present.

Mr. Malfroy (Westland): Mr. Chairman, from my experience, my opinion is that the "ringing" of logs is not desirable.

Mr. Potts (Westland): If you will read my report all through, you will find there is no such thing mentioned in it as "I never believed in ringing trees." I, in that report, have simply given my experience in connection with the timber trade. That experience has extended over thirty years on the West Coast—in and around Hokitika. It has been said that if you fell the red-pine in winter it will not keep. Now, I will give you one instance: I was putting up a sawmill some years ago at Rimu. It was in the winter time I felled some trees at the front of that mill, and they were lying there unused. Eighteen months afterwards I had an order for 24in. by 1½in. boards for boxes for sluicing. In the bush I was working in the timber was rather small, and I could not get timber large enough to supply the order. I took an axe and chipped a slice off the trees which had been felled a year and a half ago, and which lay all covered up with scrub and *débris*. The sap was just as fresh as the day the trees were felled, and I cut them into logs, and took them into the mill and put them into these boxes. Now, on the other hand, at one time we used to raft a great deal of white-pine down the Hokitika River. The white-pine was cut and laid on the skids for a couple of months before being used. The same thing applies to red-pine; if you cut red-pine in the spring or the autumn of the year, and put it on the skids, you will find that from a foot to a foot and a half of each end of these logs will be discoloured. If you cut them in the winter time, you can keep them as long as you like, and they will not be discoloured. I was asked to give my experience by the Hon. R. J. Seddon, and I have not put myself forward in any way to do it. I simply wished to show, and I am prepared to prove every statement that I have made in that report. I do not make assertions without having a knowledge of what I am speaking about. My principal idea in having anything to do with the report was that I felt a particular interest in the trade, although I am not in it now as a sawmiller, yet I would like to see it go ahead. Now, with reference to the last year and a half that I have been inspecting timber that was going to London and to the Cape, I found that the white-pine then sent had been cut the winter before, and had been lying on skids the whole summer. They were squared up and sent away, and I can assure the gentlemen present that there was not the slightest sign of decay or discolouring on these logs. The only fault found with them was that they were too small. If they had been sent of a larger size they would have brought a much greater price. The white-pine was sent in boards; if it had been sent in dials, instead of being cut up into 1in. boards, a much better price would also have been got for it. I should like to see some means used whereby the timber could be sent to market in a decent state. The president of this Conference referred, in his opening address, to the disgraceful state in which the timber from the West Coast went into market. Though I am not a scientist on the matter of sap going up or down in connection with the close season, I understand, from what I have gathered from the experts here, that I was quite safe in recommending the Government to a six-months' close season—four months in winter and two months in mid-summer. Another thing, I think it would be for their benefit in the end.

Mr. Malcolm (Southland): My impression is that the timber felled in winter is much better than that cut in summer. Some time ago I employed men to fell timber in my bush. I started cutting in the summer; but before the season finished I found that I had paid a lot of money away uselessly, because a lot of the sap was gone.

Mr. Wilson (Southland): Many contracts are going on, and a builder cannot be expected to give a sawmiller six months to season his own timber, especially if his contract is limited to three months.

Mr. Jay (Westland): I think if Mr. Potts gave his own opinion with regard to this question it would be of great interest to those present. While part of the Midland Railway was being made they had a large area to cut down, which was nothing but a mass of white-pine, &c. I thought, myself, instead of felling and burning, I will go to a certain expense, and have it cut to sawmill lengths. Some hundred and fifty or two hundred were cut into lengths, and left on the ground for six months. I subsequently went to Butler Brothers, and asked them to buy these logs. Butler bought some of them, and they were cut up; but I can assure you they were utterly useless. The balance is lying on the ground rotting, and this proves that timber cut early only deteriorates. I can assure you Mr. Butler will be able to tell you the same experience with regard to that timber. Before it was ready for the mill it was utterly useless, and Mr. Butler refused to take the balance of the timber which I had had cut.

Mr. Butler (Westland): I may say in respect to these logs, as with Mr. Jay, that we (Butler Brothers) were the unfortunate purchasers of them. There were two hundred logs, for which we made special arrangements to cut. We carried this out on the most economical lines; and after we had loaded these logs and cut them up we stood at a loss on the transaction by some £25. It seems

to me that if logs felled in the winter are kept for a period of six months they become almost useless. Take, for instance, a 10ft.-log; on each end there is at least 1ft. unfit for use. This represents one-fifth of the whole log, the remaining 8ft., not being a trade length, is entirely lost. Apart from that there is the fact that, although they had been put on skids to keep them off the ground, on the lower side the whole length along the log, right to the heart, was too far gone to be of any use.

Mr. Dawson (Southland): I, as a practical timber man of forty years' experience, entirely concur with what has been said by Messrs. Jay and Butler.

Mr. McConnon (Westland): I had occasion to execute an order for about 40,000ft. or 50,000ft., and we cut it up for the purpose of haulage, as we have a heavy incline up which we have to bring our timber. We thought we would lighten the timber, so we let it lay for six months after cutting. We found, as Mr. Potts did, about a foot or eight inches at each end of the log discoloured.

Mr. McFarlane (Southland): My experience has been similar to that expressed, that the timber was discoloured and brownish for about 2ft. in, and I find that the timber will not stand very many years before it turns into dust.

Mr. Prouse (Wellington): With respect to cutting in winter, we all know farmers cut down in the winter. I hold there is no particular loss incurred by cutting timber down all the winter. It is the heart of the matai and rimu that is most seasonable. If it is not necessary, why should such stringent regulations be placed upon it? This is my experience, and there are gentlemen interested in the industry who have more experience here than I have who coincide with my opinion, although my father split rails here fifty years ago.

Mr. P. Bartholomew (Wellington): I have always found that the heart of white-pine is much firmer and drier in the summer time, and in better condition than in the winter.

Mr. Potts (Westland): Mr. Chairman, I think the last speaker misunderstood what I said. I said that the recommendations I made in my report were borne out by what experts had said—I refer to Professor Kirk and Mr. H. J. Mathews, who are experts—that was what I meant to say. I think I have given, in my report to the Government, practical experience, because I have been brought up in the timber trade since I was a lad, and I cut the first timber that was cut on the West Coast by machinery.

Mr. Goldie (Auckland): It is very evident the last speaker was not an expert upon the question, for he had admitted that, in recommending a close season to the Government, he had acted upon the advice of several supposed experts. He (Mr. Goldie) would like to say that it was just this kind of person they had most to fear from—men, in most cases, who had gathered a little information from books, and from persons whom they casually met, but who had no practical experience. He might say that, for himself and others who were present from the North, they were not in attendance because they hoped or expected to get anything from the Government, but rather to save themselves from absolute ruin, which would be the inevitable result if the Government introduced legislation upon the lines of these would-be experts, but who really knew very little indeed about the practical management of bushes or mills.

Mr. Morris (Westland): Mr. Chairman, I see one paragraph in Mr. Potts's report which strikes me as being good, that is with regard to what Mr. Potts says about sawmilling areas.

Mr. Chairman: The question is that this Interim Report No. 1 be adopted. It recommends, in the first clause, that it is impracticable to define any particular season for cutting timber. In the second place, it has recommended that the proposal to ring trees would be injurious and costly. I may say Mr. Potts did not make any recommendation, but this has been suggested as a desirable thing to do, and the committee thought it would be well to put on record their opinion, so that it might come up afterwards. With regard to my experience in cutting white-pine, it entirely agrees with Mr. Jay and others; and it does not matter what time you cut the timber, and leave it exposed to the summer weather, it is only a matter of a few months when it becomes practically useless for any marketable purposes. I have seen this time after time; trees that were left in parts of the bush that could not be got at for two or three months after they were felled had to be left. We find that as soon as the timber is cut it ought to be made into boards and stacked up.

Mr. Falkner (Wellington): I have not had much experience myself in the timber industry; but I have heard that it was necessary for us to fell the tree when the sap is down. With regard to the seasoned timber, I think it is necessary that the yards should be represented here. I think it is their duty to provide the contractors who build with seasoned timber. I think, if people would only go to the yards for timber, they would get the seasoned article. With regard to ringing trees, I have frequently felled trees in the bush by burning the roots, but I have not found any of them that were improved by it. The sap is a very large proportion of the red-pine tree.

Mr. Leyland's motion, That the report be adopted, was then agreed to.

REPORT OF NO. 1 COMMITTEE.

Mr. Tanner brought up the report of No. 1 committee.

Exportation.

Your Committee beg to report as follows:—

Kahikatea (white-pine):

- (a.) That it is neither necessary nor practicable to define any particular season of the year for felling timber.
- (b.) That it is of the utmost importance that all timber should be cut true to measure, with square ends in every case.
- (c.) That it is necessary that this timber should be seasoned sufficiently to reach the market for which it is intended in first-class condition. To effect this, artificial drying may be necessary in some districts.

Rimu :

Sections (a), (b), and (c), under the above heading, "Kahikatea," equally apply to this timber.

Re Export Trade : Markets.

London and the Continent: It is recommended that trial-shipments be sent under proper supervision by the shippers.

Africa: From information recently received, it is believed that the timbers above mentioned will be in demand shortly.

Melbourne: It appears there is no market at present for rimu; but this trade should be fostered.

Re London Wharf: That it is the opinion of this committee the time has not yet arrived to ask the Government to lease a wharf in London for the New Zealand timber trade.

Intercolonial Trade.

That this trade has increased considerably during the past two years. The consumption of kahikatea, in particular, has been doubled. And the future of the trade depends entirely upon the action of the sawmillers in sending timber of a uniform quality, well prepared, and in ceasing unhealthy competition among themselves.

Railage for Export.

That the Government be requested to carry by rail all timber for export only at Class F rates.

Tarpaulins for Export.

That the Government be requested to supply the necessary tarpaulins for seasoned timber for export only, at a charge of 1s. per truck.

THOMAS TANNER, Chairman.

Mr. T. Tanner (Hawke's Bay): I do not think the report calls for very many remarks. I think the 1st section is concise—in fact, it only refers to the white-pine. I think it is sufficiently clear to understand without any further explanation; and, coming down to the paragraph under the export trade and markets, I would like to call the attention of the members of the Conference to the only one to which I shall refer, and that is to a London wharf: "That it is the opinion of this committee the time has not yet arrived to ask the Government to lease a wharf in London for the New Zealand timber trade." Now, that may be a disappointment to some members. The Government, from the information and recommendation of these gentlemen, had come to the conclusion that it was desirable, in the interests of the timber trade, to lease a wharf in London, to get a wharf in a convenient situation, and to make a charge of so much per 100ft. upon the timber sold to recoup the cost of the wharf and expenses of management. Now, it was evident to the committee that such a course as that might be desirable, if there were a very large trade already established; but, considering that it is only just in its infancy and the quantity of timber that has been sent and will be sent probably for some time to England will be very small, it is evident that the loss that would be incurred in getting a wharf in an eligible situation, and the cost of management, would be far too great for the advantages to be received from it. Therefore the committee came to conclusion that it would be inadvisable to recommend the Government to ask for the lease of the wharf at present. The committee think that trial-shipments may be sent under the same conditions as they are at present, and arrangements to be made with an agent in England, who might receive this timber and put it upon the market in the interests of consignors. Now, I have been given to understand that a gentleman who is going shortly to England—a gentleman of the name of Reiser—intends to start an agency; but Mr. Trapp has just informed me that he has received a telegram from him that he is not going to commence it at present. However, it was pointed out to us that it would be necessary for some person with capital at his command to undertake it. Unless it is all put into the hands of one man, we shall have just the same difficulties that we had in the export trade of our frozen meat. The great disadvantage of that was this: Numbers of agents are sending Home frozen meat to the English market, and then these men, wishing to realise, come into competition with each other, so that our meat-sales suffer in consequence, and the lowest prices are the result; and precisely the same thing would happen with our timber if we sent consignments to England to different agents. These agents will not feel inclined to hold this timber, and, owing to paying dock and other charges, they will, of course, place it in the market as soon as they have got possession of it. The result is that our agents will enter into competition with each other, and the loss is sure to be great, because the price falls directly there is a glut in the market. If we only manage to make such arrangements that one agent can receive our timber, he will be able to put it upon the market when there is a demand for it, and to hold it when there is not. It is the only way that I can see that we shall have any hope of getting anything like a fair value for the timber that we send to England. There is another thing I would call attention to: the progress of the intercolonial trade. Our report states that this trade has increased considerably during the past two years. The consumption of white-pine, in particular, has been doubled; and the future of the trade depends entirely upon the action of the sawmillers in sending timber of a uniform quality, well prepared, and to cease unhealthy competition amongst themselves. Sawmillers should not be tempted by offers from England to lower the value of their timber. Now it has already begun, there have been requests sent from England, from those desirous of purchasing the timber from the different saw-

millers in this country, to ask them what is the lowest price they are prepared to take to send timber to London—that is, freight paid, not f.o.b., but freight paid to London. Well, there is always a temptation on the part of the sawmillers to do exactly what contractors do in tendering—they want to get rid of their timber. The danger is that they will compete with each other for the lowest instead of the highest price; the result will be that, when the sawmillers send Home their timber at the lowest possible rate that they can afford to sell it at, it will not be likely that the price will rise; therefore the better plan is for districts rather to combine together and to come to some understanding as to the price they are to ask in sending timber to the Home markets. Then, I will call attention to the next paragraph—"Railage for Export: That the Government be requested to carry by rail all timber for export only at Class F rates." The committee first proposed to ask the Government to make a percentage reduction; but it was thought afterwards that that might not work satisfactorily, and it is the way, and the only way, in which we propose at present to ask the Government to fulfil its promise of assistance. The Government expected to be asked to take a wharf; but, if you agree with us that it is inadvisable to do so, we think that, as the Government is very anxious to foster the timber industry, this is a question in which they may be fairly asked to assist, and, if they allow us this concession, it will be a great advantage to the timber trade. The railage at present is a great deal too expensive for the small profits that we are likely to get from the export trade. This Class F, I believe, brings the railage to about the same as the firewood traffic. Now, if we come to consider that the quantity of timber put on an L truck, which is about 2,600ft.—that is equal to about three cords of firewood in the same truck—and as it pays to convey firewood it would pay equally well to carry sawn timber; and, as far as the actual profits are concerned at the present prices, I think there is less profit upon the sawn timber than there is on the firewood. Then, the only other paragraph to refer to is the last one that discusses the question of the necessary preparation of your timber for export. It was shown that not only should the timber be seasoned, but when the timber is seasoned it should be carefully transported, and kept as much as possible from the wet; and it was thought desirable to ask the Government to supply tarpaulins, so that when seasoned timber is sent for export—indeed, we do not want it for the local trade—that tarpaulins should be provided to cover the trucks of timber to preserve it from the rain, so that it might be shipped in a dry state, and that the charge should be 1s. for each truck loaded. While it does not seem very much in the aggregate, it would amount to very good interest on the cost of the tarpaulins. Now, just a word more in reference to a wharf. I should have added that it is considered by one writer that these charges should be very much diminished. The dock charges in England—or, I should say, the charges generally in England, including the dock charges—amount to about 2s. or 2s. 2d. per 100ft. That seems a very large charge, and so it is on the value of the timber, but it rarely comes out at less than that—generally more. I came across some remarks on this subject by a writer, who says, "That these charges could be considerably lessened by employing lighters to discharge timber from the ships, instead of discharging in a dock. This, of course, is a point which will have to be carefully considered, and further information obtained." In conclusion, I need only further remark that the importance of the timber trade to New Zealand cannot be overrated. The intrinsic value of our timber is second to none in the world, and if, by judicious management, we are able to command the intercolonial and foreign trade, the value of our export should be second only to wool, and may in time surpass even that.

Mr. T. Tanner (Hawke's Bay) then moved the adoption of the report, which was seconded by *Mr. R. Blair*.

Mr. C. D. Wilson (Southland): I think, Sir, if a very large exporting trade is to be carried on, it will be most injurious to the welfare of the colony. We have a lot to consider in the wholesale cutting-down of our bush. It is necessary for the welfare of the country to have a large area of bush. I do not think we have forests to develop such a large export business. I am sure Mr. Tanner will see, if the bush is cut for exporting on a large scale, wood will deteriorate. The destruction of our forests is a very serious matter. It is encouraging to know that we have 25 per cent. of the bush lands untouched. This is necessary for moisture, rainfall, and shelter for our stock, &c. It is a gross mistake for this Conference to advocate a large export trade. We cannot undertake to supply European and other markets, for in a very short time we will be importing ourselves. We have seen the evil that has resulted in other countries simply for the want of bush. There is no doubt we will suffer if we allow this cutting to go on. I think the Conference should consider this matter before going into the question of the export business. Already on the east coast of the South Island our timbers are getting scarce, and, if we go in for exporting, the whole of it will soon be gone. We do not wish, a few years hence, to be practically importing three-fourths of our timber. I think this is a matter of vast importance to the country generally, and for the country to consider.

Mr. J. J. Payne (Auckland): I think it is better for us to preserve the whole of our forests than part of them. We chop down thousands of acres of bush-land and fire it, and we get the grass on the land. The Premier told us that if we could conserve the value of these forests it would do good in the end. I would like to conserve the kauri-trees of this colony, because I am satisfied they will not last very long, and a man living to-day will see the end of them, owing to the destruction by fire.

Mr. R. Blair (Auckland): With regard to artificial drying, the experience we had in Auckland was three drying-sheds were put up at a cost of £50,000 to £60,000 by the late Union Sash and Door Company. After putting the sap through, the timber came out about one-third in weight to what it was when it went in first, and made the timber practically valueless. The Kauri Timber Company always hold in stock from a million to a million and a half of seasoned timber stacked for factory purposes. Though that timber is not used until after it has been twelve to eighteen months in the stacks, sometimes it runs up to three or four years. Artificial drying, as far as our Auckland experience is concerned, has not been a success in seasoning timber. I think that, as far as the seasoning of kauri is concerned, the market at Home now is an absolutely established fact; and they have

found, I have no doubt, from their own experience as to the means of seasoning that they adopt, and from what can be gathered, the whole of the seasoning is altogether in open air.

Mr. H. Smith (Auckland): In 1859, when we asked for, and got, a large drying-shed, we found after four or five months' experience, the timber was in a worse condition than when we put it in. It would curl up in one direction, and then in another. About twenty-five years ago, I remember, at the Union Sash and Door Company, we tried a similar process, and had to give it up. And then again, at the Auckland, now the Kauri Timber Company, Mr. Holdship had the floor laid down with hot pipes, and timber was laid on that floor for about a fortnight, and then brought out, and on several occasions we made up sashes with it; but we found they were so bad that we had to condemn the sashes altogether. From my experience, I find artificial drying is no good whatever. I believe that the timber stacked in the rain is everything to be desired after being there for some six or nine months.

Mr. Trapp (Auckland): There are no timbers going Home to any great extent, with the exception of kauri, so that, if you had a wharf at Home, we would be the only big users; and, as small shipments go, you could not arrange for the vessel to go to the wharf. We (the Kauri Timber Company) thought, if the Government, instead of renting this wharf, which would lose them from £2,000 to £3,000 a year, were to make an experiment on the West Coast by artificial drying to help the sawmillers, because I can assure you their wood, the white-pine, is quite different from the white-pine from the North—what is wrong with it I do not know, but it will not ship and transport as well as the white-pine from the North, although the quality is equally as good—and I think, if the Government were to assist them to open a drying-shed, instead of going after a myth in the shape of a wharf, it would help the West Coast sawmillers to find out what is wrong with their timber, and assist them in competition with the North, and give them an outside market.

Mr. J. Jay (Westland): I beg to thank Mr. Trapp very kindly indeed for his remarks in referring to the West Coast. We have a different climatic condition altogether from what they have in Auckland. Now, the artificial drying is not at all necessary there. My own experience of steam-drying is not to a very great extent; but, if our timber was properly seasoned and dried before it was sent away, we should be able to render it in a proper condition for export. All I can say is this: that, if we have not any export trade, we have so many mills in the country that half our mills will be idle. It is to keep the whole of the mills in the country employed, and to bring the money into the country, that we require an export trade. Mr. Peter Bartholomew has some information on this drying process. He has very kindly explained the matter to me, and I should be glad if he would give his experience to the Conference.

Mr. P. Bartholomew (Wellington): I believe Mr. Blair said we have had two drying-tables, but we have never had a drying-table in New Zealand. You cannot dry timber properly without an artificial way; it needs a proper process for doing so.

Mr. Richardson (Southland): Mr. Chairman, gentlemen speaking from their own experience said, if we wished to get our timbers received on the Home market, we must offer some great inducement to overcome the conservatism of the trades in the Old Country; and, in the second instance, to induce architects by offering them some inducement to experiment with our timber. The only inducement is to offer our timber at a less price; still we want a better price. The Premier comes here and tells us the Government is exceedingly anxious to foster this export trade. At the same time he tells us there is a Bill to confine our felling to seven months in the year, and every gentleman speaking from practical experience says that legislation as proposed would add 50 per cent. to the cost of producing. We may as well give up the idea of exporting. I think we cannot too strongly impress upon the Government that this proposed legislation of the close season is totally opposed to their other statements that they wish to foster the industry. Mr. Seddon says that the Government intend to foster the export trade; but I say, instead of fostering the industry, it will be a stepmother to it.

Mr. T. Carmichael (Wellington): I would like to say a few words as to the artificial drying of timber, more especially in respect to red-pine. Some years ago, when down in Christchurch, I had a contract for the National Mortgage and Agency's Buildings. I was unable to procure timber at that time, and I had to resort to artificial drying, for I had to complete the contract within the time specified. The manner that I adopted was the steam-chest, and I placed the red-pine in that. Within the same fortnight I had that timber so thoroughly seasoned that I was able to put it into the building, and it has never given since. I think that really some system of steam applied to timber for the export trade would render the timber so as to land in the London market in a good condition.

Mr. Falkner (Wellington): Would it be too much for this Conference to ask that the Government should prepare us some plan so that we shall know what amount of forest exists in New Zealand? I think it is of some importance that we should know how we do stand.

Mr. Chairman: I think that would come in better in connection with the Forestry Committee's report. They will probably report in connection with that later on.

Mr. Leyland (Auckland): Such a map is already in existence, and there is a report in the New Zealand Annual Year-book of the Lands Department giving the quantity of kauri timber in the North.

Mr. Nettleford (Wellington): Some remarks have been made with regard to the wharf in London. There is one thing that it would be well to mention: it is the difficulty to get a wharf sufficiently near for people to go and see the stuff, and of having a rail to take it to all parts of the United Kingdom. In the docks there are rails in which goods can be carried without any change of trucks. People will not take the trouble to go and see the timber which they may not care for. It is certainly no use starting a retail wharf; the trade is so rotten that it would swallow up everything with regard to duties. It took about ten years to get satin-walnut into the market, but now it is the ruling thing for furniture, &c.

Mr. T. Tanner (Hawke's Bay) in reply: Mr. Chairman and gentlemen,—I need only refer to the remarks made by Mr. Wilson, who expressed his fears at the destruction of the New Zealand forests. I think the area of the forest land is about twenty million acres, and it will take a very long time, and some generations hence, before that will be worked up for export trade; and, as that was his only fear—that the export trade might have the effect of destroying the whole of the timbers in this vast area—I do not think we need have any such fears as that. Then, again, I dare say the Conference will remember the remarks of the Premier. He said he thought it might be necessary to make regulations in reference to the state of lands which will provide for small areas, and the best bush on the different sections, being reserved. At present the regulations require people to cut the timber down, and burn it up, and grass the land. And he said that it might be necessary to pass regulations to have certain reserves on the different blocks of land that were sold; but, as a practical man, he also added that they would be no use unless the timber might be valuable for the export trade; therefore you see the necessities of the case under the land regulations. Unless the sale or the leasing of the bush land is to cease altogether, it is necessary that we should turn this valuable capital which we have on our lands to good account, instead of leaving it to rot on the ground. If we utilise it for export, we shall get foreign capital into this country. We shall provide large numbers of families with the necessaries of life. I think it is for the interests of the people of two or three generations hence, if we can only do that by establishing a sound export trade.

Mr. Butler (Westland): There is one question I should like to make a remark on, and that comes under the heading "Railage for Export." In this matter, it may not occur to many members present, but in some instances the railage is only conducted over private companies' lines, and any concession would only affect those carrying their timber over the Government lines. In the case of eight miles of railway on the coast, people carry their timber over a section of the Midland Railway, and it will be clearly seen we cannot ask the Midland Railway Company to carry timber over their railway at Class F rates as proposed. In respect to this recommendation, I would ask you to add the following words to the clause "Railage for Export": "And, as millers who are sending timber by private companies' lines would not be recompensed by this concession, the Government should endeavour to make special conditions to meet such cases."

Mr. Trapp (Auckland): Regarding the export of timber, with the exception of kauri, I think you would find it would be difficult to introduce the wood into the English markets. If you imagine you are going to send cargoes Home, and they are going to command good prices, you are mistaken. Kauri lost us thousands of pounds. Before you get an export trade, you must find out the way your wood is going to be cut; you must trim the edges, and make it look nice. If you put it alongside Baltic timber, they would not give you within 2s. or 3s. for it. If the sawmillers ship bad quality they will lose the market. Every mill that gets on in the local market gets on in the English market. No doubt, if you could send Home half of what your mills cut, your local trade would realise 30 per cent. or 40 per cent. better prices.

Professor Kirk (Wellington): I fully agree with what I have heard concerning the English market. I know something of the English timber market, and I am quite sure we are not going to put our timber in in an off-hand manner. There is one way that would meet the difficulty, I think, and that is, if the Government at Home could inform us of the particular timbers with which ours would come into competition. There is the American spruce, an excellent timber. Another, a very different one, is the Baltic spruce, as it is generally known. This is a timber superior to our own. Now, I do not know whether we can place our kahikatea, or white-pine, on the market at the same rate which the Baltic pine commands; and, if we cannot do that for ordinary timber, I think we shall find this a very difficult matter to deal with. The American spruce is a timber of very great toughness, and very durable. In all this it closely resembles our own white-pine. The Baltic white-pine is more durable; it takes a finer finish, and is in all respects a superior article. Now, these are the two timbers that the kahikatea must come into competition with on the British market, and I think we could get some assistance if we knew the ruling prices which these timbers command. We ought to know the wholesale prices and the retail prices. Another timber is the rimu. I think we will get a market for it in England if sent in a certain way. For instance, the rimu would come into competition with what is known as American birch. I regard the rimu as altogether superior to a large portion of the timber used in England; but it will be of no use for us to send our rimu in the ordinary forms. It must be sent in the form of large or small fitches. I think a fairly good market would be commanded, providing that the timber be sent in a proper marketable condition. It would have a very large demand when once you got it into the hands of the manufacturers. I would say, again, it is no use to send our ordinary cut stuff. There is one other point I should like to suggest—that is, with regard to foreign markets, whether any information has been sought with regard to the market in China.

Mr. Trapp (Auckland): We sent some kauri to China, but I might inform you that we lost money on it. Extensive forests were about to be opened in Japan, and not only would timber be poured into China by the Japanese, but there was a likelihood that they would be competing with New Zealand for the Australian market.

Professor Kirk: Well, I think it might be worth while if the British Consuls in China were instructed to ascertain for us what kinds of timber are most particularly in demand, and the prevailing rates. I think there might be a market for some of ours over there. About twenty years ago some short kauri logs sent to China realised satisfactory rates.

Mr. Trapp: As regards one of your remarks, Professor Kirk, *re* Canadian spruce, you do not mean clear-pine?

Professor Kirk: No, spruce, Mr. Trapp. If you buy a cargo you cannot get more than about 10 per cent. of 11in. by 3in. and 12in. by 3in. A larger size you cannot get with the spruce. What the kahikatea would come into competition with is not exactly this spruce, but the Canadian clear-pine and yellow-pine woods.

A Member : We do not propose to place kahikatea against Canadian deal ; we want to place it against the white-pine, which they call Canadian clear-pine.

Professor Kirk : I certainly believe that our small white-pine cannot enter into competition and meet American spruce.

Mr. Trapp : Canadian spruce at the present time is £7 15s. per standard. Ours cannot go against it ; theirs is too cheap.

Professor Kirk : Yes ; that is what I was afraid of at first.

Mr. T. Tanner's motion, That the report be adopted, was agreed to.

The Chairman : Is the meeting in favour of considering Mr. Butler's amendment ?

Mr. Tanner (Hawke's Bay) : The amendment will result in nothing, if it is passed. It merely recommends the Government to take the matter into consideration, to do something at some time, and which simply means they will do nothing at all. We have asked the Government to carry timber under Class F. There is something very definite in that, and I hope Mr. Butler will put his amendment in a more practical form than he has done ; but really, as a Conference, we have not to deal with private interests, but interests as a whole. We cannot ask the Government to interfere with private lines, as they cannot. The only hope I can see for these gentlemen on the West Coast is, there is a prospect of the Government of this country taking over the Midland Railway line ; and, if so, they will come under the concession that we asked for.

The Chairman : If the meeting has an opportunity of considering Mr. Butler's amendment, probably Mr. Butler might withdraw it. It seems to me the recommendation by the committee is one that we ought to be cautious about. For my own part, it is vague in the way it is to carry timber. I do not know what Class F rates mean ; it is the same as firewood I am told. I think we, as business-men, ought not to recommend the Government to carry timber unless they carry it at a reasonable profit. We should not ask the Government to carry timber for export if it is going to make a loss to the colony, because, if that is done, it means that those people who do not use the railways have got to be taxed to make up the deficiency. It is hardly a fair way of putting the question, and certainly not a business one. One part of the community is to make up for the losses for the benefit of another part of it. I cannot say whether this is a paying rate or not. I do not think we ought to ask the Government to do it. In regard to the Government assistance for drying-sheds, I think that is rather below par too. I think that sawmillers ought to have sufficient enterprise to try an experiment of that kind themselves, and pay for it without asking the Government to do it ; and it is a thing that ought to be experimented upon in some small way before going in for it to any large extent. I think it is cutting it rather fine to ask for assistance.

Mr. Butler (Westland) : With regard to my amendment, I think it would have been better had the chair asked whether any one else had amendments to make. I certainly heard the remarks of Mr. Tanner, who, as he was speaking, I thought it would be wrong of me to interrupt, and I allowed him to finish. I should certainly have got up and moved my amendment had the question been asked from the chair. I must say this : In the part I come from there are eight different mills working under these conditions, and that, if there is a concession given to one part working on the Government lines, those mills which are now working on private lines would be working at a disadvantage.

Mr. Chairman : I was going to put it to the meeting whether Mr. Butler's amendment should be received or not. It certainly is out of order for any man to debate a question after the motion has been replied to ; but I do not think that it was quite understood at the time that Mr. Tanner was replying to the motion. Mr. Butler's amendment was then put to the meeting and negatived, and the report adopted.

The Conference adjourned till 2.30 p.m.

TUESDAY, 21ST JULY, 1896.

The Conference resumed at 2.30 p.m.

Mr. G. Mackie (Southland) : Mr. Chairman,—Before proceeding with the business of the day, there is a matter I would like to bring before you, and that is the matter of expenses. A few of us have met together to-day, and I have been selected as spokesman to say something about these. I can very well understand why I have been selected—it is on account of my modesty. The request is reasonable, because the Government, when inviting us to attend, said our rail and steamer charges would be paid. It is considered by a good many members that a moderate amount of their hotel expenses might be allowed them by the Government, if represented from here—say, 8s. per day. I move that the gentlemen attending this Conference be allowed their personal expenses, at the rate of 8s. per day, in addition to absolute travelling-expenses.

Mr. W. L. Kennedy (Taranaki) seconded the motion.

Mr. D. Goldie (Auckland) thought it was a very great mistake to pass a resolution of this sort at all. The Government had written and told them (the members of the Conference) their terms. It seemed to him altogether too paltry to ask the Government to give them 8s. per day. He for one should not agree to it.

Mr. Bullot (Taranaki) : Mr. Chairman,—I, as a builder, before coming to this Conference, wired and asked whether the whole of my expenses would be paid, but received no answer, and I would like to be paid.

Mr. W. Booth (Wellington) : While I sympathise with Mr. Goldie in his remarks, I think a difference might be made in regard to those who are not sawmillers. I understand builders and carpenters have come to this Conference not only at a great loss, but at inconvenience to themselves, and I think their expenses might be allowed them. However, I think it would be a mistake for the sawmillers to ask for theirs.

Mr. J. Butler (Westland) did not think that any distinction should be made. The millers throughout the country, generally speaking, were no better off than the tradesmen, and he thought the Conference should either accept the motion as a whole or reject it.

Mr. Myers opposed the motion. He did not think the Government, or any one else, should pay their expenses. He did not think the carpenters and builders expected it.

Mr. T. Tanner (Hawke's Bay): *Mr. Chairman*,—I think, Sir, the Government have been very liberal. They have invited all of us to attend here, paying our travelling-expenses, and I do not think we ought to have accepted that invitation unless coming on those terms. If any one sends an invitation to another on those terms, it is not generally expected that the person invited, if he accepts, dictates terms of his own.

Mr. Chairman: Does the mover wish to reply.

Mr. G. Mackie (Southland): *Mr. Chairman*,—As far as I am concerned, I am merely the mouthpiece of a number of gentlemen who have met together. The Government may quite expect us to make a motion of this description. It is not for the Government to act with any great difficulty to say, "Come up here and you shall have, at least, your travelling-expenses and as much more as you would like to ask." I would not expect the Government to ask us to come here and insist upon us paying our own travelling-expenses. It is quite competent for members to live on 8s. a day, and it is perfectly open for them to leave the money or take it and give it back again; but, Sir, I am not particular, either *pro* or *con*. Put it to the vote.

Mr. Chairman: The question is, "That the Government be asked to contribute 8s. per day to the personal expenses of members attending the Conference."

Motion put and negatived.

Mr. G. Mackie: I am perfectly satisfied.

No. 3 COMMITTEE.

Mr. W. M. Bell (Westland), chairman of the committee which was appointed for the purpose of considering the selection and the classification of timbers suitable for building and furniture for export purposes, brought up the following report, and moved its adoption:—

The committee appointed for the purpose of considering the selection and classification of timbers suitable for building and furniture for export purposes report as follows:—

1. The committee beg to put on record its opinion that there is but little timber in this colony for export; that our forests are not so extensive as represented; and that in twenty years hence there will be little timber in the colony.

2. That if it be considered necessary to export, producers be specially advised, when preparing timber for this purpose and for home consumption, to use only that cut from matured trees.

3. That all timber generally should stand the full size, and be evenly cut.

4. That all mouldings and architraves should be run from seasoned timber.

5. That as the only two timbers available that can be exported with safety for building purposes are kauri and rimu, these should be shipped dry.

6. That rimu, especially, should have a dry skin on it before shipment; boards and small sizes to be thoroughly dry.

7. In reference to rimu, that as only the inner heart of the tree is suitable for export for furniture purposes, this committee is of opinion that there is more demand in the colony for this class than can be produced.

8. That kauri and rimu are the best woods for furniture purposes; but matai, tawa, white-pine, and many of the other timbers of New Zealand are suitable.

9. That kilns for drying, after the mode in vogue in Queensland and some of the other colonies, be erected at the main shipping ports for the purpose of preparing timber for export.

10. That, to save great loss and disappointment, your committee recommend a thoroughly-qualified classifier, who should inspect all timber intended for export.

11. Your committee, although perhaps without its province, beg to suggest that, instead of settling the people on lands that are well timbered, the Government should select scrub-lands, or those throughout the colony which are treeless. They would then be creating a home market, and thereby stop the wholesale destruction of valuable timber by fire, as is now being done.

W. M. BELL, Chairman.

The Chairman proposed that the report be taken clause by clause. Agreed to.

Clause 1: "The committee beg to put on record its opinion that there is but little timber in this colony for export; that our forests are not so extensive as represented; and that in twenty years hence there will be little timber in the colony."

Mr. Prouse (Wellington): *Mr. Chairman*,—Is it to be supposed in this paragraph that, in the opinion of this committee, there is little timber for export; if so, then why do they advise that we should have kilns for drying, as in vogue in Queensland.

Mr. P. Bartholomew (Wellington): *Mr. Chairman*,—I would like to state we have millions of feet of black tawa for export purposes—one of the finest timbers ever heard of. We have got millions of feet that could be made into Austrian chairs that we import. There is no use made of it at all at the present time, and I say that this tawa polished up will compare with any of the Home timbers. At the last exhibition, held in Wellington some twelve or thirteen years ago I think, a piece of tawa, 10ft. by 18ft., exhibited there, was the gem of the whole exhibition. Here is a timber that there is no notice taken of in any shape or form. I say it can be put to very great use, and to say we have no timbers for export is wrong. We have millions of feet of timber for export.

Mr. Jay (Westland): Mr. Chairman,—Speaking for the West Coast of the South Island, I should like to have seen in the report some data of the committee advising this, as the Conference has no data to go upon. I can tell you the timber on the West Coast has barely been touched for some time, and it will take some fifty years before the timber can be cut out from there.

Mr. Butler (Westland): Mr. Chairman,—I beg to indorse the remarks made by Mr. Jay, and may further state that if the whole of the bush of the colony is converted into timber for local uses in twenty years, our New Zealand consumption would have to increase to an absolutely impossible extent.

Mr. D. Goldie (Auckland): I think all the men on this committee were simply builders, and think they ought to have taken every opportunity of getting information on the subject before framing this clause.

Mr. Richardson (Southland): Mr. Chairman,—There is one point that I think the committee has overlooked, and that is on going round Westport from the mouth of the Waiau up to Milford Sound, we have a very large extent of the colony which is unexplored, and which is all heavily timbered. Whether that timber will ever be available for export I really cannot say, but there will probably be found places in some of that country where mills can be established. I think we may safely assume that in a good portion of the inland part there is a great quantity of timber. As to what quantity there is there, nobody knows anything at all.

Mr. T. Tanner (Hawke's Bay): Mr. Chairman,—I had hoped that the gentleman who brought forward this report would have followed my example of yesterday,—namely, in bringing forward his report he would have thought the Conference would desire some information as to the grounds for the committee's estimation. Now, I am quite sure that they had not taken into consideration at all the areas of standing timber in New Zealand that have been already mentioned. In my district—Hawke's Bay—there are at least 250 square miles of standing timber; so that to pass a clause of this kind with a fact before you of that description would be simply nonsense. Before I finish my remarks I intend to move that this clause be excised from the report. I venture to say that if a clause of this kind appears in the pamphlet that is to be published by the Government, as the result of this Conference, it will be extremely damaging to the timber trade in New Zealand. The statement that in twenty years hence there will be little timber in the colony—if they were referring to the present system of land-settlement (something might be said on that head)—would be very strong language. If they were to say that unless the land settlement in New Zealand is altered, and that instead of the bush being cut up in sections of 250 acres—the settlers being required to fell so much of that every year before they can get a complete title for it—then they may have some reason for saying that a great deal of valuable timber in this country would be destroyed in the course of, perhaps, half a century; but to say that the timber for export alone would leave no timber in this country in twenty years is wrong. What do these gentlemen suppose we are going to export year by year? I suppose they think we are going to jump into an enormous export trade, and are going to send Home hundreds of feet of timber every year. I for one should be extremely delighted, because it would bring as much capital into this country as would make your heart leap for joy. This export trade will have to be worked patiently, carefully, and quietly. We shall have to do as Mr. Trapp has stated he did with the kauri timber. The timber trade will have to be pushed gradually; it will have to find its way, and it will be years before we can establish anything like an export trade in the timbers of New Zealand other than the kauri, which is already established; therefore I think such a statement as included in this clause must commend itself to this Conference as being so utterly ludicrous that members will agree to excise it. I move that this clause be excised.

Mr. W. Morris (Westland): Mr. Chairman,—I second that, and in supporting Mr. Tanner I wish to say this: We have on the West Coast of the South Island, from Hokitika southwards, some 250 miles or more of virgin forest, that has scarcely ever been touched, and the amount of timber standing on that area is something enormous; in fact, the best bush that I have seen in my time is down in that quarter. It is quite evident to me that the gentlemen who framed this clause live in the towns and know next to nothing about our forest districts, and I say it is self-preservation that causes me to rise to my feet and to state that the thing is simply ludicrous. Mr. Jay mentioned it would take fifty years to cut the timber out from the West Coast. I think if he had added a hundred to it he would have been nearer the mark. I do not know that it is necessary to add anything to what I have already said, but I think we are thoroughly just in having this clause in this report eliminated.

Mr. Tanner's proposal, that clause 1 be struck out of the report, was then agreed to.

Some of the remaining clauses were then amended, others were struck out, and the report was adopted, as follows:—

The committee appointed for the purpose of considering the selection and classification of timbers suitable for building and furniture for export purposes report as follows:—

1. That producers be specially advised, when preparing timber for export, to use only that cut from matured trees.

2. That all undressed timber should stand the full size, and be evenly cut.

3. That all mouldings and architraves should be run from seasoned timber.

4. That kilns for drying, after the mode in vogue in Queensland and some of the other colonies, be erected at the main shipping ports for the purpose of preparing timber for export.

5. Your committee, although perhaps without its province, beg to suggest that, instead of settling the people on lands that are well timbered, the Government should select scrub-lands, or those throughout the colony which are treeless. They would then be creating a home market, and thereby stop the wholesale destruction of valuable timber by fire, as is now being done.

W. M. BELL, Chairman.

MR. PROUSE'S PAPER.

Mr. Prouse (Wellington) read the following paper on "The Preservation and Utilisation of our Forests."

Mr. Chairman and gentlemen,—Having acceded to your request to prepare a paper upon the preservation and utilisation of our forests, I will, to the best of my ability, with the short time at my disposal, endeavour to place before you my views upon this most important question.

Briefly reviewing the past, I find that the valuable natural resources of our forests have never received that attention and protection from past Governments that they were entitled to; laws have been framed for their destruction, not intentionally, perhaps, but that was the result, and a solid source of wealth has been sacrificed in many cases for a fictitious one.

I am sure that most of us could supply instances which have come under our observation where men have expended a large amount of, and sometimes all, their capital in destroying valuable timber, with the hope of making a home; but, instead, have brought ruin upon themselves and their families, while the timber, if left growing upon the land, would now be bringing in a very large return in the shape of royalties. Millers would be only too glad to have the opportunity to remove the greater part of the timber which entailed so much labour, expense and loss upon the settler in the past; and if this phase of the question were searchingly inquired into it could be clearly proved that in the regulations and conditions laid upon settlers by past Governments, they (the settlers) have entered into contracts, by and with the concurrence of the Government of the day, to destroy a harvest the most valuable the land would ever produce. In many cases the crop of timber was of considerably more value than the land itself, but in the eagerness to place settlers upon the land this valuable product has been sacrificed, and the settler has not been benefited.

It will also have been impressed upon you that, while other industries have been specially fostered by bonuses and grants, grants to aid in the discovery of new processes, or open up new fields to increase the quantity and quality of those products, I do not think any aid has been given to foster this industry—one of the most valuable in our colony. The present Government certainly employed an expert, and, by so doing, show they have a desire to encourage this industry; and also, by express desire of the Premier, we are asked to confer together in this Conference—we who have embarked upon, and are interested in, this industry—to furnish a report to the Government of what we believe to be the best means to encourage, protect, and derive from our forests the greatest good for the greatest number.

There is another side to this question we must not lose sight of—namely, the effect upon the climate by the denudation of timber from large tracts of country; and there appears to be a prevalent idea, though an erroneous one, that the encouragement of timber-milling is tantamount to encouraging the destruction of our forests, the disarrangement of the atmospheric balance, and the fruitful cause of droughts, floods, and more or less dreadful catastrophes; but it only requires a little information to disperse these gloomy fears. If it were more widely known that timber-millers as a class are the staunchest protectors of our forests; that, while they remove from such forests the milling-timber growing thereon, they do not touch the greater number of trees, which, because of their size, either being too large or too small, or from defects of shape or otherwise, or because they belong to a class of timber that does not command a market, these trees are left to grow and flourish. The timber-miller culls the forests; he does not destroy them; his interest lies in a totally different direction. And the indication given to this Conference in this direction by the Premier, and further suggestions which will be made in this paper, should go a long way in disabusing people's minds on this subject; and we should not hear again a statement to the effect that the timber industry did not require fostering, as it was a source of danger to a district, after this Conference has finished its labours and its report is printed and circulated.

Within the short limits of this paper, I think I have now devoted sufficient attention to the mistakes of the past; and, therefore, shall now turn my attention to formulating what, in my opinion, is a practicable scheme for the preservation of our forests, or what remains of them. I assure you it was with pain I heard a gentleman in this Conference state that, in his opinion, some of the gentlemen present at this Conference would live to see the last of the noble kauri pine, and that the kauri as a tree was marching to extinction in the wake of the moa, the noblest of New Zealand birds.

I would, therefore, respectfully suggest to this Conference the creation of two forest Boards, one for each Island, consisting of five gentlemen engaged in, or conversant with, the requirements of the industry, two members of the Land Board, and a Stipendary Magistrate as chairman; and, if this Conference adopts this scheme, that it shall recommend to the Government the creation of two such Boards, and grant to them such powers as will make them effective for the purposes named at the head of this paper; also, that the Government be asked to issue instructions to the Crown Lands Officers to instruct their surveyors that, in cutting up bush lands, they are to report to the Board upon the character of the timber growing thereon, the difficulty or otherwise in the way of access to the block by road, tramway, or railway, or by water, as the case may be; and such other information as would be of service to the Board to arrive at a correct estimation of the position of the timber upon those lands being surveyed. Also, the appointment to every survey staff of a practical man, thoroughly trained to bushwork, connected with timber-milling, who would work under the surveyor, but should be paid an increased wage, and who should report as well to the Forests Board upon the kinds of timber, their quality and quantity, growing on such land, giving sufficient information to the Forests Board to enable them to decide whether a more careful investigation shall be made or otherwise, as they shall determine.

When a block of country had been surveyed and reported upon as suitable for the establishment of the timber industry, the Board, furnished with sufficient data to guide them, shall invite applications from timber-millers, who shall state the amount of steam horse-power at their

command, the number of men they would probably employ, what amount of forest they would require for five or ten years' milling, and the amount of royalty they were prepared to give for such rights; and, when the Board should be satisfied as to the *bona fides* of the miller, an area should be granted for the purposes of milling, subject to conditions, some of which I will endeavour to point out: First, that, in removing the timber from the land, it shall be cleared in such a manner that every year a portion of the block of land occupied by the miller may be available for settlement purposes. Second, that the timber shall be taken in such a manner as to avoid waste, and to prevent such waste inspectors qualified by experience in bush- and logging-work shall be appointed to inspect the bush at intervals of short duration, and report to the Board their findings, and the Board shall devise means to carry out thoroughly the engagements entered into with them. Third, that the miller shall pay a stated sum for the whole bush, payable in instalments at the end of every six months, or he shall pay royalty, computed from the amount of sawn timber delivered from the mill, or by such other method as the Board may insist upon.

As there are a variety of timbers, and all are not of the same quality or value for milling purposes, as also some kinds of timber grow on such poor land, that the timber is of more value than the land, the Board must be furnished with information as to the value of the different kinds of timber growing upon the land, also the probable value of the land from a pastoral or agricultural point of view, and the Board shall be empowered to decide whether such land shall be reserved for the purposes of the timber industry, or whether it shall be handed over to the Land Board for settlement purposes.

In cases where the block of land is of a varied character, good milling-timber land being interspersed with land producing timber of small or no value for milling purposes, and the Board, upon careful consideration, came to the conclusion that it would not be justified in wholly closing the land to settlement, the Forest Board shall indicate to the Land Board what sections may be opened for settlement, reserving road rights or tramway rights over such lands for a sufficient term until the milling timber shall be removed, when those special road or tramway rights shall cease to exist; also, a section for a mill site or sites shall be reserved in the most advantageous position, with small sections adjoining, for the occupancy of the workmen.

In the case of birch, totara, and white-pine forests, the land of which in many cases is of an almost worthless character, it shall be in the power of the Forests Board to determine whether these lands shall be preserved for ever as a forest reserve, only permitting useful timber to be removed, but no other timber to be destroyed; and they shall subject all persons intrusted with the removal of timber from reserves of this kind to stringent regulations for the protection of the forest, especially for its protection against the start and spread of fires in dry weather, which is the greatest menace to birch or totara forests, or to take any other preventive action which may appear to them as prudent or beneficial for the protection of the forest reserves.

That in cases where totara or birch trees have sprung up upon lands in the hands of the Crown, and there is sufficient warrant to believe that these timbers are the best crop the land would produce and most beneficial to the State, then it shall be in the discretion of the Forests Board to have these lands set aside and protected for forestry purposes.

When any private individual shall apply to the Board, stating that it is his intention to plant a portion of his land in trees for timber purposes, the Board shall give such an individual every facility to gain the information he may require, and also allow him the advice of some person skilled in forestry, that the person entering upon such a work may have every prospect of success, by which others would be encouraged to plant, and the State and the community be benefited. My experience of planting and growing of timber-trees is limited, but I know of some blue-gums planted at Wainui-o-mata some thirty years ago on inferior clay soil, which previously had grown birch timber, and I saw one felled which, so far as my memory serves me, was nearly 2ft. in diameter at the base where cut off, and 15in. in diameter 25ft. from the stump; but its chief recommendation, to my mind, was the denseness of the heart-wood, and the almost absence of sap-wood, the sap at the butt not exceeding 1in. in thickness. There were many other trees growing, beautifully proportioned, straight, and tall; some of them, on most exposed situations, as straight and supple as a fishing-rod, and both strong and elastic.

Mr. L. J. Bagnall (Thames), chairman, proposed a vote of thanks to *Mr. Prouse* for his paper, which was carried with acclamation.

FORESTRY COMMITTEE INTERIM REPORT No. 2.

Mr. D. Goldie (Auckland), chairman of this committee, handed in his report, and moved the adoption of it. The report was amended to read as follows:—

Your committee beg to report as follows:—

That it is important to conserve the forests from immediate destruction, submitting them for sale only as the requirements of the trade make it necessary, giving ample time before sale for a proper examination of such forests.

That forests on land suitable for settlement should be first disposed of, a reasonable time being given for the removal of the timber.

That in all disposal of forests for sawmilling the timber only should be offered, according to an estimated quantity and at an upset price.

That where timber is offered on lands not suitable for settlement, ample time in every case be allowed for its removal.

That in the disposal of forests in the South Island the present system be continued, but with an increased area to each sawmiller.

That, in order to comply with the recommendation in the matter of providing the most efficient and expensive plant and machinery necessary for turning out the timber in the best condi-

tion for local use and exportation, all restrictions as to the area of land which sawmillers may hold should be abolished, as it can hardly be expected that they will incur a large expenditure for machinery and plant unless they are allowed to hold large areas of bush-land so as to provide the raw material on which to operate, and so enable them to recoup themselves for the large expenditure thus incurred.

That this committee would recommend to the Government the absolute necessity of preserving to mill-owners all the rights they have acquired over streams and lands necessary to bring their timber to market, and that in any future legislation the interests of the sawmillers in this matter be carefully conserved.

That in all sleepers for Government railways, sawn sleepers be preferred to hewn, thus preventing the enormous waste which takes place in producing the latter.

Wellington, 21st July, 1896.

D. GOLDIE, Chairman.

WEDNESDAY, 22ND JULY, 1896.

The Conference resumed at 10.30 a.m.

The Chairman : The following is a letter received from the Premier of Victoria addressed to the Premier of New Zealand :—

“ SIR,—

“ Premier’s Department, Melbourne, 13th July, 1896.

“ I beg to introduce to you the bearer, Mr. G. S. Perrin, Conservator of Forests of this colony, who is representing Victoria at the Timber and Forest Conference to be held in Wellington.

“ I shall esteem it a favour if you will afford him any facilities that you may be able for obtaining an insight into matters pertaining to the subject of the Conference.

“ I have, &c.,

“ The Hon. the Premier, Wellington, N.Z.”

“ GEORGE TURNER, Premier.

The Chairman : Mr. Perrin also represents Tasmania, and I now have pleasure in introducing him to you. (Applause.)

Mr. Jay (Westland) : Before proceeding with the business of the day, Mr. Chairman, I would like to draw attention to the report of the Conference proceedings of yesterday in the *New Zealand Times* this morning. In their report this paper states that clause 1 in the “ Timber for Export ” report, brought up by Mr. W. M. Bell, and which reads as follows : “ The committee beg to put on record its opinion that there is but little timber in this colony for export, that our forests are not so extensive as represented, and that in twenty years hence there will be little timber in the colony,” was agreed to. This, Sir, is incorrect.

Mr. Tanner (Hawke’s Bay) : I think the *New Zealand Times* ought to correct the report in their paper of to-morrow, and say, so far from there not being sufficient timber in New Zealand for export, there is ample.

The Chairman : I think it is far better for people not to report at all than to report so incorrectly. It does a great deal of harm to the Conference that such a statement as that should go forth. I suggest that they should correct the error in to-morrow morning’s paper, and that we ask them to state “ that, so far from it being shown that there was not sufficient timber for export, it was abundantly proved that there was any amount for the purpose.” I hope, if there is a *New Zealand Times* reporter present, he will make a note of this.

The matter was then dropped.

FORESTRY COMMITTEE INTERIM REPORT NO. 3.

This report was handed in by *Mr. D. Goldie* (Auckland), chairman, and was read.

Your committee beg to report as follows :—

1. That it is desirable to at once commence the planting of lands unfit for agricultural or pastoral purposes, especially in treeless districts, and where native timbers are becoming scarce.
2. That the varieties of trees so planted be limited to those already known to grow satisfactorily in the district, and produce suitable timbers and barks for the requirements of such districts.
3. That experimental grounds be established in such districts for the raising of various trees and for the supply of trees at nominal cost to those wishing to make plantations for timber purposes only.
4. That a qualified practical man be appointed to organize and direct forestry operations in the colony under the Lands Department, and the committee urge that great care should be taken to obtain a really good man.
5. That advice and directions be afforded by Government to assist private planting for forestry purposes.
6. That larger areas of beech or other forests be reserved for climatic purposes, especially in districts where rivers have their sources.
7. That a list of trees suitable for cultivation in New Zealand, compiled by Mr. J. Matthews, is appended. Other lists of suitable trees have been published by the State Forest Department.
8. That black wattle and other suitable trees for tanning purposes be planted on pumice and other suitable lands.
9. That returns be obtained of the present accessible and marketable forest timber in the different districts.
10. That in future appointments to the Land Boards, the committee consider it desirable that persons conversant with the timber industry should not be overlooked.

11. The committee recommends the disuse of the terms "red-pine," "white-pine," and "black-pine," in favour of "rimu," "kahikatea," and "matai," in order to prevent their being confused with timbers having similar common names in Europe. Also that "tooth-leaved-beech," "entire-leaved-beech," "silver-beech," and "mountain-beech," should be used instead of the unmeaning terms "red-birch," "brown-birch," "black-birch," &c.

D. GOLDIE, Chairman.

The report was then taken into consideration.

Clause 1: "That it is desirable to at once commence the planting of lands unfit for agricultural or pastoral purposes, especially in treeless districts, and where native timbers are becoming scarce."—Adopted.

Clause 2: "That the varieties of trees so planted be limited to those already known to grow satisfactorily in the district, and produce suitable timbers and barks for the requirements of such districts."

The Chairman: Gentlemen,—We have present with us Mr. G. S. Perrin, Conservator of Forests, Victoria, who might speak to some of these clauses, and probably remarks from him would come in in connection with remarks of other gentlemen present as to the variety of trees suitable for growing in this country.

Mr. Perrin (Victoria): Mr. Chairman and gentlemen,—I need scarcely say it gives me very great pleasure to be present at this Conference to talk over various matters connected with forestry. I find myself at the outset at a slight disadvantage, because I am not familiar with your New Zealand timbers. With regard to a resolution which you passed, I presume you will permit me to make a few remarks. The question of planting, I take it, in New Zealand is a most important one. From the slight experience that I have had on a trip from Auckland to Wellington, which is my first experience of New Zealand, I can see that you have a considerable area of treeless land, I presume more particularly in this portion of the colony. The question of planting is to you more important than it would be, perhaps, to us in Victoria. There I have two plantations, one containing 480,000 trees, introduced from all parts of the world. In another plantation, near Ballarat, I have 230,000 trees. The progress of these is something astonishing. I would strongly advise that plantations be formed in most suitable places for tree-growing in this colony. Of course, with the limited acquaintance I have of your soils and climate, it would be inadvisable for me at this stage to commit myself to any statement as to what description of trees, &c., you should plant. I quite agree to a certain extent that you should conserve your best timber trees. There are trees from the other colonies which might suit your conditions of growth, and I think that you ought to, if possible, introduce those trees. Clause 2 reads: "That the varieties of trees so planted be limited to those already known to grow satisfactorily in the districts, and produce suitable timbers and barks for the requirements of such districts." To give you an illustration of this, some five years ago I introduced the sugar-gum from South Australia into Victoria, where its growth is remarkable, and it thrives in all the warmer parts of the colony, and in places where I never thought it would grow. It grows at a remarkably rapid pace. Of course, it is a tree that requires a warm climate. There are many other eucalypti in Victoria which, I think, you could introduce with advantage here—having regard to the geological and climatic conditions of growth. I feel sure there are many trees in Tasmania, New South Wales, and Victoria that would suit your climate. I should recommend that clause 2 be amended so as to enable you to plant other trees besides your own—that is, approved timber trees from other colonies. I may say I have brought reports with me, giving lists of timbers and forestry information, which I will hand over to the Conference at its conclusion. (Applause.) The best of the eucalyptus we can grow in Victoria fit for sawmilling purposes in about thirty to thirty-five years are red-gum, box, and stringy-bark. Now, people have got the idea that the red-gum is a tree hundreds of years old; it is nothing of the kind. I myself do not believe in the extreme age of some of the timber trees, as is generally set forth. I believe your kauri timber is a very slow-growing tree; at the same time, by introducing foreign or colonial timber trees, you will have very rapid growers, and yet good timber. Many of these will come to maturity in about thirty to thirty-five years.

Mr. Prouse (Wellington): It was stated at the committee meeting, at which I was sorry Mr. Perrin could not attend, that it was of no use to plant our own trees owing to their slow growth. My idea was that foreign trees should be planted which would mature rapidly. Mr. Perrin evidently thinks it was our intention to plant New Zealand trees only.

Mr. Perrin: Our trees are not as slow-growing as has been represented. We can grow stringy-bark suitable for milling in from thirty to forty years, according to locality.

Clause 2 was then adopted.

Clause 3: "That experimental grounds be established in such districts for the raising of various trees, and for the supply of trees at nominal cost to those wishing to make plantations for timber purposes only."

Mr. Perrin: Mr. Chairman and gentlemen,—By experimental grounds I presume you mean nurseries. I may say that in Victoria I have four State nurseries—one at Mount Macedon, one at Creswick, one at Maryborough, and one at Gunbower on the River Murray. The State nursery at Macedon is a very large nursery, and we send out on the average 150,000 trees every year. We give them away for nothing to farmers in dry districts, and supply trees generally to people who will take special care of them. We distribute throughout Victoria all kinds of trees, including the better class of eucalypti; but our principal trees raised are exotics, such as the Oregon pine and other cedars, approved conifers, and hardwoods. We send the trees out at two years old. They are planted in beds in the nursery, and we have experienced nurserymen to each nursery. The trees are sent to the railway-station, and the person applying for the trees pays the freight. Tree-growing has been very successful indeed. I am proud to say the percentage is from 70 to 75 per cent., and I think, in a dry country like Victoria, it is a very satisfactory percentage indeed. The people are taking great interest in the matter, and every care of the trees. At first there was

some little trouble, and I have no doubt you would experience the same thing here at the start. The want of knowledge as to planting was surprising. It seems a very simple thing to plant a tree, but I was utterly astounded at the ignorance which prevailed among people generally in the simple act of planting a tree. I inaugurated a system whereby information is given upon the notices sent out to people obtaining trees. In these, full directions for planting and care of the trees are given, and it works very satisfactorily. I am sorry I was not aware of the scope of this Conference, or I would have brought over a set of forms which I used; but, however, on my return I will send them over to your secretary. I mentioned the sugar-gum; there is scarcely a farmer from all parts of Victoria that does not ask me for sugar-gum. I distribute about thirty thousand every year. It is a tree which, I think, might grow very well in Auckland. I do not think that it will grow in the South Island, because it does not stand the frost. The cost of the Macedon State nursery—this is our largest, and, in fact, our distributing nursery—is about £1,200 to £1,400 a year, and the results amply justify the continuance of it; and I think it would be very hard work now to abolish it. I hope that forestry will be taken up by the Government in no half-hearted spirit. It is no use inaugurating forestry, gentlemen, unless it is intended to go on with it. You might just as well stop as you are at present. I would not care to say too much on this subject at this stage, yet I feel that I should make a few remarks on this matter, because it is of most vital importance to your colony. I do not mean in the sense that you have got no timber to send away. This is, comparatively speaking, a treeless country, and I think, if forestry were properly carried out, it would be of inestimable advantage to your people; and I only hope and trust that the Government will see its way to establish forestry on a proper basis and not go back from it, and grow trees for your commercial uses.

Clause 3 adopted.

Clause 4: "That a qualified practical man be appointed to organize and direct forestry operations in the colony under the Lands Department, and the committee urge that great care should be taken to obtain a really good man."

Mr. Trapp (Auckland): As regards the Government, we have had a little bit of experience of it. We have had a book prepared—half of it was "cobbed," and the other part of it is not worth the paper it is written on; and I think the Government should withdraw this book straight away to prevent it going any further, and doing any further harm.

A Member: What is the title of the book?

Mr. Trapp: When I read the book I was so disgusted with it that I did not take the title. Certain things were shown to me that were absurd. If the Government are going to have people to look after the forestry, they should have really good men that understand the work. It is no use them thinking that they are going to get anybody at ordinary labourers' wages to look after it; they want a man who is well up in it. If they do not do that all the good of this Conference will be useless. It is not any use the Government interfering in any way unless in the Forestry Department; and unless they get an absolutely good man it is far better to leave it alone, and let people get on the best way they possibly can.

Mr. D. Goldie (Auckland): I have very great pleasure in supporting the clause; and I presume the book referred to by Mr. Trapp is the "New Zealand Timbers and Forest Products," compiled by Sir Westby Perceval.

Mr. Trapp: Then, Sir Westby Perceval ought to have been more careful before he allowed the book to be published, because he could have read what Mr. Kirk had to say and left the other out, and he would have done more good.

Mr. Goldie: I think we ought to recommend the Government to be very careful in what they are doing in these matters. Certain persons who have got the ear of the Government—evidently men of the right colour—want situations to compile these books, and very likely these men would simply ruin us. I have very great pleasure in supporting Mr. Trapp, "That the Government should be exceedingly careful in selecting persons who have some knowledge with regard to forestry."

Mr. T. Tanner (Hawke's Bay): I understand, Sir, the person recommended to the Government is one who understands the planting of forest-trees—he is, in fact, a forester. Well, I suppose Professor Kirk is sufficiently acquainted with the subject to be the appointee of the Government for such a purpose. I do not think we should be too hard upon the Agent-General for publishing that pretty book. If you look through it you will see some very pretty pictures. There is no doubt it was published more to amuse the people of England than for any good that was likely to accrue from any business transactions that would be likely to follow. It will not be necessary to condemn it in too severe terms.

The Chairman: Do I understand that Mr. Trapp and Mr. Goldie wish to add to this clause, "That the Government should be careful in their appointment of a duly-qualified man?"

Mr. Tanner: The appointment of a person who is acquainted with the Forestry Department—in planting especially.

Mr. Prouse (Wellington): I would suggest that the word be "qualified."

The Chairman: "As a duly qualified man, acquainted with the planting and growing of forest trees."

Mr. Trapp: While on this subject I might state that the Government were recommended to have a wharf at Home. Only those who have something to do with timber-yards know the expense of them. That wharf would cost them not less than £2,500 a year; and if the Government are now asked not to do it, Mr. Perrin says they could very well run two State nurseries, which would be of more benefit to the colony than one wharf, which would be an absolute loss.

The Chairman: I have amended the clause—viz., "That a qualified practical man be appointed to organize and direct forestry operations in the colony under the Lands Department, and the Committee urge that great care should be taken to obtain a really good man."

Adopted.

Clause 5: "That advice and directions be afforded by Government to assist private planting for forestry purposes."

Mr. Perrin said that he would send over the details from Australia in connection with the work which would come in in connection with this clause.

The clause was then adopted.

Clause 6: "That larger areas of beech or other forests be reserved for climatic purposes, especially in districts where rivers have their sources."

The Chairman: It is the opinion of those who have experience in the matter that more should be done in this direction. We recommend this to the consideration of the Government.

Mr. Perrin: With regard to clause 6, it is a very important one. All forestry experts advocate the retention of the trees, no matter what character they may be, on the tops of high mountains or ranges for climatic influences. The larger questions of climatic influences I need not go into now. It is a very important one, and it is universally admitted that the necessity for preserving trees on the tops of ranges, near the sources of your rivers, is very important. The question of water-supply depends very much upon it. The question of silting depends upon it, and in Victoria we have on all our water-reservoirs very large areas reserved. The Metropolitan Board of Works, which undertakes the water-supply of the City of Melbourne, has about 175,000 acres reserved, and they will not allow a splitter or sawmiller inside that area. I may say I have just had a controversy with my old friend the Chairman of the Metropolitan Board of Works on the subject. I think the sawmillers should have admittance to these reserves, and I have expressed myself to that effect. The question is one which is very important to you as a community—the keeping of your water-supply pure and clear. It is considered so important in Victoria that the reserves are mostly fenced off, and all traffic is prohibited; so that it has, perhaps, a larger aspect of importance, to get these reserves in such places as may be found necessary for water-supply and climatic purposes, and more particularly with regard to the watersheds of your rivers.

Clause 6 was then adopted.

Clause 7: "That a list of trees suitable for cultivation in New Zealand, compiled by Mr. H. J. Matthews, is appended. Other lists of suitable trees have been published by the State Forest Department."—Adopted.

Clause 8: "That black wattle and other suitable trees for tanning purposes be planted on pumice and other suitable lands."—Adopted.

Clause 9: "That returns be obtained of the present accessible and marketable forest timber in the different districts."—Adopted.

Clause 10: "That in future appointments to the Land Boards the committee consider it desirable that persons conversant with the timber industry should not be overlooked."—Adopted.

Clause 11: "The committee recommends the disuse of the terms 'red-pine,' 'white-pine,' and 'black-pine,' in favour of 'rimu,' 'kahikatea,' and 'matai,' in order to prevent their being confused with timbers having similar common names in Europe. Also that 'tooth-leaved-beech,' 'entire-leaved-beech,' 'silver-beech,' and 'mountain-beech' should be used instead of the unmeaning terms 'red-birch,' 'brown-birch,' 'black-birch,' &c."

Mr. Morris (Westland): Mr. Chairman,—We have three birches to my knowledge—that is not a very good way of distinguishing one from the other. If you call it tooth-leaved-beech, we have three tooth-leaved-beeches. We have a silver-beech and a brown-beech—that is a very good timber indeed. Tooth-leaved-beech covers the two, so there requires to be some better distinction between these beeches.

Mr. Falkner (Wellington): Mr. Chairman, they are all clearly defined in Professor Kirk's work on "The Forestry of New Zealand," and any sawmiller with a little observation and care can refer to the trees he finds in the forest in the book, and I think he could find out for himself. I believe the birch, the silver one, is the tawhero.

Mr. Marris (Nelson): Mr. Chairman, the user as well as the producer ought to know what is the difference.

Mr. Butler (Westland): Mr. Chairman, in connection with the naming of timbers, I would like to ask Professor Kirk whether there is any difference between the yellow-pine of Westport and the silver-pine of Greymouth. I would suggest it ought to be known as "silver-pine."

Professor Kirk: Mr. Chairman, I have not seen in any part of Southland silver-pines, whether white or red. They do not appear to go further south than the north-western border of the Otago Province, in the sounds. They are really two distinct pines. There is really no difficulty in distinguishing these beeches. It may seem egotistical, but it seems to me that when you have good specimens an intelligent man should find no difficulty in distinguishing one from the other. The points that distinguish them are very clear. The heartwood of the "black-hearted birch" is more or less irregular in outline, and the leaves are quite entire, with a downy undersurface. "Mountain-birch" is easily distinguished from the preceding one, as it scarcely enters into commerce like the others. The difficulty, I may say, is that the people of New Zealand have applied the term "birch" to any small-leaved forest-tree. The tree "black-birch," or "tooth-leaved birch," is distinguished from all others by the sharply-toothed thin leaves with obvious veins. The "brown-birch," or "silver-beech" as it should be called, has rather obtuse leaves of thicker texture, with the veins either indistinct or absent.

Mr. Marris (Nelson): Mr. Chairman, I am not satisfied with Professor Kirk's explanation. There are two birches that we cannot distinguish, one is called by us "black-birch" and the other "brown-birch," and they should have different names. One is reddish and the other brownish, and I thought there might be some way of distinguishing the two.

Mr. Morris (Westland): Mr. Chairman, Professor Kirk has told us that there is a wide difference between what he terms "red-pine," or "red silver-pine," and "yellow silver-pine." On the West Coast "yellow-pine" and "silver-pine" are identically the same timbers, and there it is called

“yellow-pine.” Further south it is called “silver-pine,” and I am positive, myself, that it is exactly the same timber, yet it is not the “yellow-pine” on the West Coast. Now, these differences should not exist in such a small area as that. Any way, I am quite satisfied, from what Professor Kirk has told us, that there is a “yellow-pine,” but “yellow-pine” and “silver-pine,” in the small district that I have mentioned now, are confounding, and they are one and the same timber; so I think that it is necessary that some clear definition should be made, so that people cannot make these mistakes.

Professor Kirk: Mr. Chairman, if any of the gentlemen interested in the work will send me specimens of the leaves I will at once tell them the name of the pines, whether it be “yellow” or “red.” There are two distinct pines in Westland—in fact, they run all through the colony, although abundant in Westland. They have somewhat different properties, but, for all that, they are equally durable. If any of the gentlemen find a difficulty in distinguishing these, they can send me specimens, and direct them “On public service only,” and the same with the beeches.

Mr. Butler (Westland): Mr. Chairman, I may say that botanically there may be a difference, but commercially there is none; and, to set aside these trade differences, I suggest that it should be known under the one heading only.

Mr. Peter Bartholomew (Wellington): Mr. Chairman, I do not see why it should be called “silver-pine” in one place and “white-pine” in another. In the Manawatu district it is all “yellow-pine.”

Professor Kirk: Common kahikatea.

The Chairman: Kahikatea and silver-pine are different altogether. I think it is desirable that something should be done so that there should not be a confusion of ideas with regard to the timber, and this recommendation naturally applies to certain districts, and if this would be adopted some further progress might be made. As the industry becomes more developed, as far as the export trade is concerned, the Forestry Department would help to settle this question, and bring about a more uniform classification of timbers.

Mr. Butler (Westland): Mr. Chairman, I think if an order came to Greymouth for yellow-pine we should feel very dubious as to supplying it, as our pine is distinctly known as “silver-pine.”

Mr. Morris (Westland): Mr. Chairman, what we call “silver-pine” is a scrub, and what we call yellow-pine” is a timber-tree.

Clause 11 was agreed to, and the report, as amended, was then adopted.

MR. MATTHEWS'S PAPER.

Mr. Matthews (Dunedin) then read the following paper:—

Wellington, 21st July, 1896.

MR. CHAIRMAN AND GENTLEMEN,—Accept my thanks for the honour you have conferred on me by requesting that I should prepare a paper on “Forestry for New Zealand.” You are aware that the short time at my disposal has prevented my entering into the question at any length, and many points have doubtless been overlooked. However, should this paper contain anything that will provoke discussion, and tend to further the protection of the material that adds so much to the beautifying and prosperity of this colony, my efforts will not have been in vain.—HENRY J. MATTHEWS, Dunedin.

To the Forestry Committee, New Zealand Timber Conference.

SOME NOTES ON THE FORESTRY QUESTION.

Part I.—Sylviculture.

The destruction of our native forests has for many years been to me a source of deep regret, especially during my periodical visits to districts such as Catlin's River, Seaward Forest, Riverton, and the Leith Valley. Here, as in all colonies where natural forests generally prevail in great abundance, new settlers find timber-trees a mere nuisance, and get rid of them by the easiest possible methods, in order to have the land put under a more profitable crop for the time being. In the districts mentioned I know of settlers who entered their bush sections, then in a virgin state, and at once began the work of clearing and burning. So soon as this was effected they found the want of shelter, and sent to Dunedin for a hundred or two macrocarpas. The time has long since arrived when a thorough system of forestry should be adopted, not only from a commercial standpoint, but also in view of climatic influence.

For many years we have been importing immense quantities of timber, such as ash, hickory, and also various Australian hardwoods, all of which might well have been grown here, and fit to cut ere this, had sylviculture been established and maintained at an early period, more particularly when there is so much waste land in this colony, of excellent capabilities for the growing of timber, the greater part of which is worthless for either agricultural or pastoral pursuits. As the population increases and agricultural pursuits extend, the demand for timber will increase, so that systematic sylviculture should be encouraged, in order to make the future supply equal to, or, rather, exceed, the demand.

The advantages of forestry in improving our climate must not be overlooked, for if we succeed in creating artificial forests in our treeless wastes, particularly in Central Otago, the benefits derived thereby will undoubtedly prove of much value, and, though it is yet uncertain whether the influence of forests increase the total rainfall of a district, it has been proved beyond doubt that “their presence prevents excessive evaporation, and renders the flow of water more regular and permanent, thus preventing heavy floods in winter and excessive drought in summer.” I could give innumerable quotations from leading scientists of the day to prove that forests act as storehouses of mois-

ture both by the leafy canopy covering the earth, and the decaying leaves on the surface of the ground retaining the rain, and regulating its distribution. In addition to the benefits derived by the presence of forest-lands in ameliorating the climate, decreasing excessive evaporation, and consequent dryness of soil, the effects of heavy gales would be greatly diminished, in being split up by striking forest areas, as well as their becoming charged with moisture, and thereby considerably lessening their damaging effects on crops and vegetation generally. This would be of special benefit in Canterbury, where the heaviest gales are usually hot ones. For these reasons, the conservation of existing forests, especially on steep mountain-sides and at the sources of rivers and streams, should not be overlooked; and it is to be hoped that effective means will be adopted to reserve larger areas than any reservations yet made in such localities, even if the timber is at present or ever likely to be of commercial value. Steep, forest-clad hills being suddenly cleared of their vegetation, the shallow layer of soil would soon follow, by being swept down to the rivers by heavy rains, and future planting become a work of great difficulty or even an impossibility in such localities; and this would be succeeded by the drying-up of springs, lessening of streams and rivers during dry periods, and the increase of storm-water in times of rain.

Let us now consider what indigenous trees are suitable for timber-planting. In consequence of nearly all New Zealand trees being surface-rooters, the effects of wind and sun on the surface of newly-formed plantations would be certain death in a very short time. The only method likely to succeed is by replanting existing forests that have been already cleared of the largest marketable timber, of which there are thousands of acres in the colony, and a system of judicious thinning of saplings, especially in *Fagus* woods. Such bush-land usually contains a fair sprinkling of good growing timber, but not of sufficient value to warrant their being left to nature without utilising the intervening spaces. Patches of undergrowth between these trees could be partially cleared and replanted by natives, and from my experience in raising and growing nearly all our forest flora during the last fifteen years I have no doubt they would do well, provided animals of all descriptions were carefully excluded. There are, however, two kinds at least that will grow under the same conditions as exotic trees—viz., totara and five of the species of *Fagus*. I cultivate these trees in ordinary garden soil without any particular treatment, and find they do remarkably well, especially *Fagus*, which makes, on an average, thirty inches of vertical growth per annum. The extensive forests of *Fagus* which prevail in both Islands will renew themselves without artificial means being adopted if moderate precaution is exercised in felling and hauling the mature timber already existing in large quantities; and judicious thinning of the young saplings would be of much service in securing a more even crop of timber, and regulating the growth so that crops could be obtained at relatively short periods. Many people may say that our beeches are not worth preserving for timber, but against this there is evidence of much carelessness in selecting trees. It is well known the best results can only be obtained by felling mature trees at the proper seasons. Perhaps no class of native timbers requires so much care in selecting as the beeches, if the timber is required for outside purposes. Trees past maturity are always found to be decayed at the heart, while immature ones are useless for most purposes. Even leaving aside durability, there is the value of their bark for tanning purposes, all varieties, I believe, being more or less suitable for this purpose. But for climatic purposes alone it would be judicious to maintain and extend our beech forests, as they occur throughout both Islands at the source of most of our important rivers, and on high country generally up to over 4,500ft., in all covering an area greatly exceeding that of our lowland bush-country. I am fairly safe in asserting that this is the only genus of New Zealand trees likely to survive for any indefinite period of time. Another advantage of growing beech timber is that it is not attacked by rabbits. Here let me call your attention to what is, I consider, the greatest difficulty in creating new forests in this colony. I refer to the rabbit-pest. True, we can enclose our areas with netting, but it is almost impossible to prevent a stray rabbit from gaining admittance to the enclosure, and the damage done in a single night to a young plantation is much more than one could estimate.

Totara is very slow in the South, and I am not inclined to recommend it for planting except in the North Island, where it may probably produce timber before the millenium. But I am probably rash in making such an assertion; I had quite forgotten that Mr. Freyberg was interviewed by a representative of a Dunedin paper lately, and that that gentleman threw a considerable amount of light on the growing of totara. One or two of his statements show how absurd our ideas have been, and what a delusion we have been labouring under with regard to the propagation and growing of this tree. I may say that I do not concur in that gentleman's opinions. I have already pointed out that it is impossible to plant the majority of New Zealand trees except in bush-clad lands, and will now say a few words regarding the age some of our forest-trees must obtain before reaching maturity. The following table taken from the "Forest Flora," and the late Mr. W. N. Blair's book on "Building Materials of Otago," will show the approximate ages of our commonest timbers:—

Name.	Approximate Ages.	Name.	Approximate Ages.
	Years.		Years.
Manuka	100 to 250	Red-pine (rimu)	400 to 650
Rata	200 to 450	Yellow-pine	300
Broadleaf	340 to 700	Silver-birch	150 to 330
Pokaka	200	White-birch	80 to 180
Miro	150 to 300	Kauri	600 to 3,600
Totara	470 to 800	Cedar	150 to 400
Black-pine (matai)	270 to 400	Red-birch	130 to 300
White-pine	370 to 600		

It is evident, therefore, a second crop cannot be obtained from the more valuable of our native timbers, within reasonable limits, at all events, not until long after our lowland forests are exhausted. I will now consider what exotic timber-trees are suitable for planting here, and are likely to attain maturity within a reasonable time. Before attempting to answer this question, I would direct your attention to the great diversity of surface, soil, and climate of New Zealand—perhaps as much as, or greater than, any other country, and it is particularly adapted to the healthy development of a much more varied selection of trees than any other British possession, with perhaps the exception of India. All the European trees have proved themselves adapted to this colony, and grow here to even greater dimensions in a much shorter space of time than in their native homes. American trees, without exception, have made excellent progress and healthy growth where planted in suitable soils and positions to enable them to develop without restriction. Numerous Indian mountain trees are thoroughly hardy in the South Island, and the more useful of them have made good average growth. I cannot urge too strongly the desirability of at once experimenting with a number of the more valuable eucalypti, such as jarrah, karri, and ironbark, which are particularly adapted for the North Island, and I feel sure they will do well if judiciously planted and maintained. The constant and increasing demand for these timbers, especially ironbark, for marine and bridge-work and railways in this colony must be a considerable annual expenditure. Here let me point out a serious mistake that has been made in planting larch in lowland districts—I refer more particularly to the plantations in Canterbury alongside the railway line, and to the various forest plantations in that province. It has been proved, both in Britain and Europe generally, that this tree produces the most durable and valuable timber of all coniferous trees when planted on high country, whilst, if grown on lowlands, especially if liable to floods, the timber is little better than useless.

The following is a list of timber-trees which I consider best adapted for general planting throughout New Zealand. The list is not an exhaustive one, as the necessities and requirements of each district would require careful consideration, as well as their adaptability to various soils and situations:—

English Oak (*Quercus pedunculata*).

In England it is next to larch in paying value, and takes first place amongst the hard woods of Britain for all economical purposes. Timber best on heavy, deep clay-land.

English Ash (*Fraxinus excelsior*).

No English forest-tree produces timber that can be so extensively used. The value of timber is increased by rapidity of growth, and is best when not over sixty years old. For toughness and elasticity no European tree can approach it. Peaty soils on sides of ravines with constant moisture.

English Elm (*Ulmus campestris*).

Timber tough and not liable to shakes; sap-wood as good as the heart. Any ordinary soil if not wet. Suitable for naves of wheels, furniture, water-troughs, &c.

European Larch (*Larix europea*).

The toughest and most lasting of all coniferous trees, even in a young state, and the sap-wood is of equal durability to the heart. For railway-sleepers, telegraph-poles, mine-props, fencing-posts, and all purposes where subject to alternate wet and dry, it has no equal in Europe. Timber produced on poor and exposed situations is much more lasting than when grown on rich soil in sheltered valleys. Profitable returns can be had in fifteen years.

Sycamore (*Acer pseudo-platanus*).

Used for all general woodware, and a most accommodating tree as regards soil, if not wet.

Sugar-maple (*Acer saccharinum*).

A valuable timber, extensively used in America for house-building, and also for furniture under the name of "bird's-eye maple." Sheltered positions in light, dry soil.

False Acacia (*Robina pseudo-acacia*).

Harder, stronger, and more durable than English oak, and suitable for indoor or outdoor purposes. Any poor, dry soil, with moderate shelter.

English Beech (*Fagus sylvatica*).

Timber extensively used in Europe for all woodware and tools, bentwood chairs, &c. Light, dry, and chalky soil.

Alder (*Alnus glutinosa*).

Timber valued for charcoal powder, and for using under water. Swampy land.

English Birch (*Betula alba*).

Used for turnery, barrels, staves, and crates. Most useful as a shelter-tree at the edges of plantations. Sandy or stony soil.

Sweet Chestnut (*Castanea vesca*).

Good, sound timber for house-building, where it has proved very durable. Deep, dry, sandy loam.

Laburnum (*Cytisus Alpinus*, *C. laburnum*).

Timber highly valued by cabinetmakers, the average price of which in England is 7s. per cubic foot. Any ordinary soil.

Cork-oak (*Quercus suber*).

Although not a valuable tree, I have placed this species here on account of its value for the production of cork.

Before naming a few of the coniferous trees, I may mention several European and American trees of more or less value that are known to do well in New Zealand: Poplars in variety, horn-beam, walnut, horse chestnut, lime, tulip tree, holly, mountain-ash, &c.

(*Abies menzeisii*).

Timber almost identical in appearance with the Oregon pine. Thoroughly hardy, and of rapid growth. Loamy, cool-bottomed land.

Oregon Pine (*Abies douglassi*).

Timber strong, elastic, and durable, and perhaps the fastest-growing of all the firs. Not liable to any disease. Deep, free, and moist land.

Red-spruce (*Abies rubra*).

Timber hard and durable for all general purposes. Good deep soil in sheltered situations.

Norway Spruce (*Abies excessa*).

Perhaps the most largely used timber in Europe for all general purposes. Cool-bottomed, low-lying, sheltered situations.

Silver-fir (*Abies pectinata*).

Timber much used where exposed to wet and dry alternately. Excellent quality. Rich soil in sheltered positions.

Pitch-pine (*Pinus rigida*).

Rapid and free-growing, very durable if kept dry. Much used for all heavy structures. Yields immense quantities of resin. Poor soil in any exposed situation.

Lofty Indian Pine (*Pinus excelsa*).

Rapid growth and valuable timber; yields first-class turpentine. Medium soils, either sheltered or moderately exposed.

Clear-pine (*Pinus strobus*).

When close grown is very free of knots; timber too well known here to require description. Rocky or sandy soil with partial shelter.

Heavy-pine (*Pinus ponderosa*).

Coarse-grained timber; very durable. Large amount of resin; fast-growing on any moderate soil.

Corsican Pine (*Pinus laricio*).

Light-yellow timber, used extensively in Europe for general purposes. Not attacked by rabbits; yields valuable resin. Will do well in any soil of a gravelly nature in the most exposed of positions.

Australian Pine (*Pinus austriaca*).

Rapid growth and excellent timber for most purposes; will flourish from the water's edge to 2,000ft. altitude. Best timber is produced on dry, sloping hills.

Red-pine (*Pinus resinosa*).

The most valuable timber in America. Hardy, and of free growth. Large amount of resin. Dry, gravelly soil on knolls and ridges.

Californian Redwood (*Sequoia sempervirens*).

Timber free from knots and unrivalled for Venetian blinds and other inside fittings; does not warp or twist; fast-growing. Medium soil in sheltered valleys.

Upright Cypress (*Cupressus sempervirens*).

Timber the most durable known. Old buildings in Italy contain this timber in a sound state after being in use over 1,000 years. Deep, dry, sandy loam, freely exposed.

Thuja gigantea.

Fine-grained yellow timber, durable and useful, of quick growth. Sandy loam in exposed situations up to 2,000ft.

Red-juniper or pencil-cedar (*Juniperus virginiana*).

Excellent timber for carcass-work in cabinetmaking; clean and straight-grained. Dry, rocky soil on hillsides; always found on poor ridges.

Blue-gum (*Eucalyptus globulus*).

Timber well known, but varies greatly according to soil and situation.

Jarrah-gum (*Eucalyptus marginata*).

Famed for its indestructible wood, and also known as the mahogany-tree. It is valuable for very heavy structures, bridges, and railway-sleepers, &c. Regarding this timber, I would draw your attention to the general opinion of experts—that it effectually resists the attacks of the toredo. During a visit to Port Chalmers lately I had occasion to observe repairs being made on one of the piers, and found that it was jarrah that had been so badly affected by this worm. Several of the workmen engaged there assured me that the value of this timber was much exaggerated.

Red-gum (*Eucalyptus rostrata*).

This timber is one of the most highly esteemed in all Australia, being heavy, hard, strong, and durable, even underground or in water. Used in the construction of bridges.

Broad-leaved Ironbark (*Eucalyptus siderophylla*).

The most valuable wood for piles, girders, and railway-sleepers, and for every purpose for which strength and durability are required.

Sugar-gum (*Eucalyptus corynocalyx*).

The wood is remarkably heavy, very dense, hard, and strong. In great request as fence-posts, railway-sleepers, naves, and felloes.

Giant Eucalypt (*Eucalyptus amyg*).

Timber is very useful for many kinds of carpenters' work. In drying it does not twist. Yields a very much larger percentage of oil than any other variety.

Karra-gum (*Eucalyptus diversicolour*).

It is very hardy, and grows comparatively quickly. The wood is light-coloured, bends freely, straight-grained, and is tough.

Stringy-bark (*Eucalyptus obliqua*).

Very valuable timber-tree. Rapid in growth.

You will observe I have not included in the foregoing list such trees as *Sequoia gigantea*, *Pinus insignis*, *Cupressus macrocarpa*, and many others, as their timbers are known to be of little value except as firewood.

I need not enter into the details of forest management as applicable to this colony, but will mention a few of the most important matters, such as the collecting of such seeds as are procurable in the colony, the various methods of packing seeds from abroad to insure successful germination on arrival, a point I have given attention to for many years. This is especially applicable to such seeds as English beech, maples, cork-oaks, limes, &c., none of which will carry successfully packed as ordinary seeds. The establishment of nurseries in suitable positions for the propagation of trees is a most important matter, much more so than is generally supposed. The first points to be considered are soil and situation. The soil must be variable, from heavy clay to fairly light loam. The situation must be somewhat exposed, but not liable to cutting winds, which do more harm to young nursery stock than heavy frost. Some ten years since I had occasion to extend my own nursery to a much more exposed situation than formerly, and I was much chaffed by even experienced men for trying to bring into working-order poor, heavy clay-land in such an exposed position. However, I have lived to see the advantages of the change, and, though trees make less top-growth than in good soil and in sheltered localities, they have the advantage of their roots being very fibrous, and therefore thrive better when planted out, and, even when transplanted to exposed situations, show the smallest percentage of loss. Another point in connection with nursery management, and a most important one in regard to expenditure, is the laying-out of "breaks," so that the whole property can be worked by the plough. On the 10 acres I refer to a spade is never used except to raise trees; even in the lining-out of seedling plants the plough turns up a couple of furrows against each row. By this method six men, with the aid of a plough, can line out on an average twelve thousand trees at 12in. apart in a day of eight hours. The area for nursery grounds should be of considerable extent, to allow the rotation of crops, as no soil will continue to produce healthy trees year after year without a change of culture. The method I adopt is to manure heavily every third season, and take off a crop of oats, clover, or rye in time for autumn planting. These are but a few of the various methods connected with nursery management, but I must not trespass further on your time. Encouragement should be given, with a view to stimulate private planting in some of the treeless districts, by supplying trees at a nominal cost, and also by the advice and direction of a competent man in the employ of the Forestry Department. In conclusion, let me say that before planting operations are commenced a thoroughly well-considered scheme must be adopted, plans and estimates of the various works proposed operating upon made, or failure will be the result.

Part II.—Felling, Seasoning, Conversion, Exportation, and By-products.

Felling Timber.—Considerable diversity of opinion exists as to the proper season for felling timber in New Zealand. European trees being mostly deciduous, their period of rest is marked by the fall of leaf in autumn, after which trees may be felled until spring growth begins. But New

Zealand trees are nearly all evergreens, and therefore it is very difficult to define stated periods when growths are complete in the majority of trees, as they vary in ripening their growth, as well as in different parts of the colony. Several sawmillers at this Conference have told me during the last few days that "it does not matter what time of the year trees are felled as the sap is always up." Others assert that "felling should only be done when the sap is down." In trees the sap is never down, but its flow is at certain times—namely, when the first and second growths are complete—less active. Therefore it is not a question of sap being "up" or "down," but of sap in an active state and sap at partial rest. "Sap" is water containing more or less soluble matter. At the completion of growth it has incorporated the larger part of soluble matter with the woody fibre, and the remainder is mostly water. Wood cut at this time is not only more solid, but will dry quicker than when growth is active. When sap becomes active (in spring and autumn) it partially dissolves the woody fibre, and, if felled during these seasons, the wood is not only weakened, but drying is retarded in consequence of the matter thus held in solution.

How, then, are we to determine when growth is least active in the majority of trees? The late Mr. Balfour was in favour of midsummer felling. Professor Kirk says in winter. The late Mr. W. N. Blair advocated winter and summer. Let us therefore see when the grafting and budding of our native trees can be performed, as during these operations growth must either lie dormant or be in the least active condition.

These methods are only resorted to when it is desirable to perpetuate a particular type of variegated form—weeping totaras, variegated broadleaves, karakas, pittosporums, ratas may be mentioned as instances. Grafting is done just before the flow of sap begins—viz., in August and September—and it therefore follows that felling should not be continued beyond August in the North and September in the South. Budding, on the other hand, is performed at the completion of first growth, and when sap is at partial rest, at which time also, if the weather permit, the transplanting of all evergreen trees can be effected with more success than during autumn and winter, as a second growth afterwards takes place, both in roots and branches, thereby establishing the trees before cold weather sets in. I therefore agree with Mr. Blair that the best months for felling timber in New Zealand are May, June, and July for the North, and June, July, and August for the South. Next to winter, December and January for the North, and January and February for the South. Timber felled at other seasons loses a great part of its value, and is less durable than when felled at the seasons indicated. No doubt this would increase the cost of production, as well as seriously interfere with the present mode of conducting sawmilling operations in the colony. These questions must be considered by practical men at this Conference, and I venture to predict the verdict returned will be, "We admit felling should be done at certain seasons, but it is impracticable in the meantime."

But, although advocating these two periods for felling, I do not mean that trees are then in the best condition for disbranching and sawing up for timber. Advantage should be taken of the leaves to exhaust all the sap possible remaining in the trunk when felled.

If an evergreen tree is cut down its leaves will not wither at once, because there is a sufficient supply of sap within the tree to keep them fresh for a considerable time, this time being regulated by the state of the weather, as during warm, dry weather the evaporation of sap through the leaves will be much quicker than during damp weather, when it may almost cease.

Not until the supply of sap is exhausted will the leaves wither, and the log is then left in the best condition for use. That this statement is a correct one can be proved by cutting off two similar branches from any evergreen and trimming them to equal weight. Remove at once the leaves from one branch, and allow the other to become thoroughly withered before removing, then compare the weight of the two branches.

It is sometimes suggested that by adopting the practice of "ringing" the trees can be felled at any season they are required. But the sap does not ascend through that portion of the tree; it ascends through the alburnum, or sapwood, and descends through the liber, or inner bark. It is clear, therefore, that ringing in no way prevents the sap from ascending, and the practice of felling timber all the year round is one that should not be continued.

Seasoning Timber.—The proper seasoning of timber is one of the most important matters connected with the industry, and I am glad to learn the Government are adopting means to insure success in this direction.

It may be asserted that the low price for timber in New Zealand would not allow a margin of profit if additional expense were entailed by sufficient systematic seasoning, and consequent accumulation of stocks. But timber here is too cheap, no doubt due to excessive competition and the low rates at which forests can be acquired. The public will, I feel sure, be glad to pay a higher price for reliable, well-cut, seasoned timber that can be used at once without fear of warping or shrinking, and not decaying within reasonable limits. The object of seasoning timber, as every one knows, is to expel the natural sap remaining in it, which otherwise putrefies and causes decay. Most modern authorities agree that the simplest method is to submerge the entire log in a running stream for a few weeks, and afterwards thoroughly dry it under cover, in open-sided sheds.

Numerous methods have been devised for the quick seasoning of timber, none of which have been entirely successful, as there is danger of extracting the chemical juices that give elasticity, toughness, and durability. Throughout the world natural seasoning has been proved to be the best for all timbers.

Perhaps the best authority on New Zealand timbers was the late Mr. W. N. Blair, who wrote, "Proper seasoning doubles the strength of timber, and increases its durability to an indefinite extent."

During the few years I was employed in one of our largest manufacturing sawmills in Dunedin I had some experience in drying timber by means of heated air. The timber was certainly dried effectually, but the strength was weakened by at least half, and figured rimu came out as plain as

a deal board. I often hear the remark that our timbers are worthless for building purposes; but want of seasoning and utter disregard to the seasons for felling I believe to be accountable for this popular fallacy. All over the colony timber is utilised for house-building which, in many cases, was growing in the forest a week or so previously. Painting wet timber is also conducive to immediate decay, by retaining and preventing the escape of the sap, which at once ferments. I may next mention a case that has been brought under my notice. In one of the largest buildings erected in Dunedin, some five years ago, one of the beams was painted. It happened to be located above the office. Recently the floor above this painted beam showed unmistakable signs of sinking. A tradesman was called in, who discovered the whole beam, 12in. by 8in. rimu, was entirely rotten. Now, this was the only beam in the building that was painted, and an examination proved that all the others remained sound.

This brings us to the important operation of stacking timber for seasoning. Much seasoned timber that is procurable here shows serious defects by being stacked flat in a damp state, with stacking-sticks between the boards. Wherever these stacking-sticks come in contact with the timber the sap soon putrefies through being unable to escape, and black marks result, which cannot be obliterated, not only rendering the timber useless for polished work, but also causing the part so affected to rot in a short time. I have repeatedly experimented in drying timber in different positions—on the flat, on edge, and on end, standing at a high angle—and have found that the latter method is by far the quickest in reducing the weight, which, of course, means that it contains less sap; no doubt, on account of the timber being porous, the sap runs out at the bottom. At all events, I have proved this repeatedly, and know many tradesmen who agree with me. When half dry in this position I would advocate stacking on edge with toothed racks in open-sided sheds. By allowing the larger portion of sap to escape before stacking there is no risk of the toothed rack disfiguring the timber or causing decay, which is an utter impossibility if the timber is stacked on the flat with stacking-sticks between. It has been urged that by stacking timber on the flat to a considerable height boards that are inclined to warp or twist will be kept in a flat position by excessive weight. This is mere conjecture, and it can be proved at any timber-yard that only for a few inches on either side of the sticks are the boards flat, and that only so long as the weight keeps them so. As I have previously remarked when speaking of felling timber, nothing will prevent a board from drying hollow or round if it has been cut on a wrong system. I admit that the amount of space necessary in stacking as I suggest is a serious disadvantage as well as an item of increased expenditure in drying large quantities, but I have no doubt this will be counterbalanced by the production of thoroughly sound seasoned timber.

Conversion.—Woodworkers generally in this colony complain of the unreliable nature of our native timber for manufacturing and house-building. Nor is this without some reason. A board that seems to all appearances thoroughly seasoned will at once commence to warp and twist if merely a shaving is planed off the surface. I have seen an 18ft. length of rusticated lumber (kauri) shrink in length $\frac{3}{4}$ in., and 4ft. drawer-fronts, well fitted and of seemingly dry stuff, shrink $\frac{3}{8}$ in., as well as become $\frac{1}{2}$ in. hollow on their face. Felling during the autumn and spring months is mainly accountable for this shrinkage; but careless cutting of the log is the cause of warping and twisting. How seldom do we find panels and the general run of cabinetmakers' wide timber cut to best advantage. Much otherwise good timber has been rendered useless for first-class work on account of the annular rings (towards the edges) being almost parallel with the surface, instead of crossing the board as near to right angles as possible. Venetian-blind and musical-instrument makers seem to be almost the only people who pay proper attention to the cutting of their timber. A wide board cut with its outer annular rings running parallel to its surface cannot be seasoned without one side becoming hollow and the other round. I need scarcely point out that the cause of timber warping as alluded to is on account of irregular contraction, the interior layers of wood being older are more compact and solid than exterior layers of the same tree, consequently during the process of seasoning the latter contract more than the former, and the result is a hollow on one side and a round on the other, as well as the same defects lengthwise.

Nor is this the only reason why timber of this class should be cut as described. Any one with experience in cutting oak or rewarewa knows that, if cut as I have shown to be the correct method, the figure which is the effect produced by the cutting at various angles of the medullary rays will be shown to advantage, while, if cut with the rings parallel to the surface, it will be extremely destitute of figure. This applies also to nearly all of our figured timber, and cannot be better illustrated than in rewarewa. Of course, for scantling and turnery it is immaterial so long as the rings run square across, and not from corner to corner. But it must not be forgotten that for all heavy beams and girders—where strength is the main object—timber should be cut with the annular rings running as near parallel with their depth as possible, as it has been repeatedly proved that beams cut in this way are stronger than if cut with the rings parallel with their breadth. There is, I am aware, much of our timber whose heart is "wandering," or "shaky"; and, again, the heart may be twisted throughout the length of the tree, and the annular rings which run parallel to two sides of the bulk at one end will run diagonally across the section at the other. Such timber cannot be cut or seasoned without twisting in the direction in which it has been growing, no matter what precautions are taken in sawing or seasoning.

Little or no attention is paid to the proper methods of preparing flooring-boards and rusticated lumber. How often do we see a floor of New Zealand timber, after being a year laid, without every other board being either hollow or round, presenting a most uneven and unworkmanlike appearance? Let us examine the end wood of the floor, and we find that one board is heart-side up and another heart-side down, and, in the case of rusticated lumber, heart-side out and heart-side in alternately. This was even more noticeable in the old feather-edged weather-board, as their faces were dressed on both sides previous to their being sawn in two, and therefore this defect was to some extent unavoidable. In running flooring-boards and rusticated lumber it troubles the

machinist little whether he dresses the heart-side or out-side so long as the grain runs in the proper direction for his machine. As it is impossible to cut a board whose flat surface contains timber all one age, that portion which is oldest—being more compact—will shrink less than the younger wood towards the outside of a tree. If a board—green or dry—has one side exposed to the air and the other not it will tend to warp in the same way as a slice of bread does when being toasted; and this may be prevented to a certain extent if the heart-side is kept up or out, as the case may be. [Specimen exhibited.] No doubt paint or varnish will, to a certain degree, prevent this, but not sufficient to maintain boards with a flat surface. The only extra labour necessary to remedy this would be the turning end for end of an occasional board when dressing. In the panels of polished or painted work a careful tradesman will always see that the heart-side is out, as, should any warping occur, it will be round on the outside face, and not liable to show plane-marks and other defects in finishing. But, should the face side become hollow by the panel being wrongly inserted, every blemish will be easily discernible. The same rule applies to all veneered work, which has a tendency to be drawn hollow on the face side by the contraction of the veneers in drying.

Another mistake which has unfortunately been too frequently made by colonial woodworkers is the fixing by glue or other means of wide boards, such as the tops of chests of drawers, side-boards, and tables, without allowing for the necessary contraction and expansion of the timber. The lateral dimensions vary so much by the action of dampness or dryness of the air that a piece of wide timber of any kind would act as a sensitive hygrometer. No doubt in a few years the extent of contraction and expansion considerably decreases, but not sufficiently to prevent a board fixed at both edges from being split from one end to the other by the action of the weather, whether inside or out of doors. In proof of this assertion one has not to go from home, but merely examine the top of a chest of drawers, or any other article of furniture, where a wide top has been fixed as described. The proper method is too well known to tradesmen, and need not be referred to.

From what I have stated it will be seen that our timber is not at fault so much as the want of care on the part of many of those who are engaged in converting the raw material, as well as of many of the cabinetmakers and builders, who often neglect the most essential principles in construction.

Exportation of Timber.—Although anxious to see our export returns augmented by the exportation of timber, I am not in a position to know if the state of our fast-disappearing forests will warrant such a large additional strain being maintained for any considerable time, and I should like to be convinced that we have sufficient to meet our own requirements—which are annually increasing—until such time that new forests could be planted and ready for felling.

It seems more than probable that, as easy accessible forests become exhausted, timber must rise in value, and the time is not far distant when the cost of procuring our supplies from less accessible regions will be more than that of the imported article.

If there is sufficient for our own consumption and to spare, then by all means let us foster the industry; but we must not fell timber all the year round, cut it up without due regard to the most approved methods, nor ship it in a green state. Supply good, sound, seasoned timber at regular intervals, and we need not fear success will follow.

By-products.—It is encouraging to hear that a prospect of utilising many waste products of our forests is likely to prove successful, especially so with regard to tanning-barks, which can be obtained from several native trees. But, notwithstanding this, I hope this Conference will devote attention to the consideration of planting large areas of black wattle, which has proved suitable for growing in many districts throughout the colony, and producing a bark of high value, and that in a very short space of time. The manufacture of paper from wood-fibre has made immense strides of late in America and Norway, and I believe that most of our newspapers here are printed on wood-pulp paper. I understand, from inquiries made, that the plant necessary for manufacture is a very costly one; but that perhaps, by the aid of a substantial bonus, we may expect such an industry to be established in the near future, especially as our local paper-mills already find a difficulty in obtaining a sufficient quantity of raw material, and are driven to import considerable quantities to meet their present requirements.

Some doubt exists as to whether any of our native timbers are suitable for this purpose, but I am assured that white-pine, ribbon-wood, lacebark, cabbage-tree, and probably a few others, would be found suitable.

Such an industry here would give a large amount of employment, and profitably convert immense quantities of waste products, the introduction of which would enable our paper-mills to compete with those abroad, and result in saving many thousands of pounds now annually paid for the imported article. Another item connected with the use of waste timber may be mentioned, for which there is an increasing demand—viz., garden-labels, and flower-stakes, both of which can be made from the very smallest scraps of timber. We import from England (though made in Germany) large quantities of these articles, of the worst material possible, which seldom lasts more than one season. In thanking you for the patient hearing afforded me, let me add that should any gentlemen, when in Dunedin, feel sufficiently interested to see the results of my experiments in drying timber, and manufacturing a number of our most useful timbers into complete suites of furniture and other useful articles, I shall be only too pleased to give them a hearty welcome. There are many matters connected with the timber industry that I should have liked to place before you, but the short notice I had to prepare a few hurried notes must be my excuse for not bringing them forward.

On the motion of the *Chairman*, Mr. Matthews was accorded a vote of thanks for his interesting and valuable paper.

Mr. Lightband (Nelson): Mr. Chairman, I wish to make a suggestion, and it is this: Seeing that many members of the Conference have not got Professor Kirk's valuable work, the "Forest Flora of New Zealand," and that the Premier has promised us a trip, I propose that those who cannot avail themselves of the trip, in lieu thereof, be made a present of Professor Kirk's work by the Government.

Mr. Morris (Westland): Mr. Chairman, I think that any one who has anything to do with New Zealand timbers should have this work.

Mr. Lightband (Nelson): Mr. Chairman, I have got a copy of this book, and I assure you I prize it very much.

Mr. Jay (Westland): Mr. Chairman, I beg to propose that the Government take the members of this Conference for a trip out to the Manawatu to Mr. Peter Bartholomew's mill.

Mr. G. Mackie (Southland): Mr. Chairman, I second that. I have promised myself this trip. I should have no objection to be presented with the book, but if I was given the choice I should certainly choose the trip.

The Chairman: It would be better to confine the matter to one thing, as the Premier has mentioned the trip. It has been moved and seconded that the members of the Conference have a trip to Mr. P. Bartholomew's mill to-morrow by special train.—Carried unanimously.

The Chairman: With reference to Professor Kirk's book.* I have had one for six years, and think everybody connected with the trade should have one.

Mr. Perrin (Victoria): Mr. Chairman, I have read the official copy of Professor Kirk's book, and I regard it as a very valuable work indeed. It is complete in every respect. I have never had the pleasure of meeting Professor Kirk before this morning; but I think the "Flora" is a work which every native of New Zealand should have who takes an interest in the products of his country. I would suggest that the gentlemen present who have not got a copy should by all means buy one. It is not a very expensive work; and I am very glad indeed that this discussion has cropped up, because it has enabled me to pay a meed of praise for a work which is calculated to be of great use for all time.

BIRCH-BARK INDUSTRY.—MR. LIGHTBAND'S PAPER.

At the request of the Conference, *Mr. Lightband* read the following paper on the birch-bark industry:—

Mr. Chairman and Gentlemen,—This subject is one of very great importance, as it has considerable interest to the tanners of this colony in the manufacture of leather. In a small way native barks have been used successfully more or less for a long time. Owing to the competition of Australian wattle-bark, which is more than three times the strength of birch-bark, the use of the birch has never been brought into practical use to supersede the wattle.

Some five or six years ago, owing to the high price of wattle-bark in Australia, I started the industry at Wakefield, and for some time had a mill for grinding the bark and shipping it, as ground bark, in bags to the other provinces. In this way I shipped two or three thousand tons to various tanners. Owing to its great bulk in comparison with the quality it did not find much favour, and I was hampered and obstructed by the then Commissioners of Railways in railway-rates. This was followed by a fall in price of wattle-bark, owing to the depression in Australia, of from £3 to £4 per ton; consequently during the last two years the industry has been more or less depressed.

At the present time there is a greater inquiry for the birch-bark. It has been found to make leathers suitable for mill-beltting, harness, basils, and all kinds of upper-leathers of the finest quality, and the introduction and sale of basils made from New Zealand skins and tanned with birch-bark have found such favour on the Continent of Europe as to lead tanners there to inquire for New Zealand bark, and write for samples; and I am glad to say there is every prospect of a revival in this industry. I may also add that the present railway officials are so regulating the tariff as to help the industry.

Owing to the bulk of the bark, I tried, at considerable loss and expense to myself, to make extracts from it, and succeeded in making under vacuum two or three hundred tons, but owing to the development of an acid or gum well known to tanners, this process was a failure. In the Nelson Provincial District we have nearly a million acres of birch-country. The development of this industry would employ a large number of hands, and give increased value to the birch-lands of the Crown and private holders.

I have suggested to your Committee that in the coming season the Government should introduce to the London market this bark, by sending to two of the largest tanners a few tons for a practical test in England. The cost would not be more than £15 or £20, and the information would be of great value from an English manufacturing point of view.

I should like to make a remark respecting the cultivation of wattle-bark. The only wattle-bark worth growing for this purpose is the large-leaf, or golden wattle, of South Australia. In the Middle Island this has been tried, but the winters are too severe. In the North Island, northwards of Auckland, it is grown successfully, and tanners have been solicited to purchase bark. This they would readily do if the growers would grind their bark and deliver it in sacks to the tanners, and I am afraid, owing to the small quantities grown, it would not pay the growers to do this.

In conclusion, I think out of the £30,000 or £40,000 remitted out of this colony for tanning materials, we ought to be able to retain some £10,000 or £15,000 of this value in circulation for the bark of this country; and I look forward to the tanners of this country helping to do this by giving every encouragement.

Mr. Burger (Westland) proposed, "That a vote of thanks be accorded Mr. Lightband for his paper."—Carried unanimously.

Mr. D. Goldie (Auckland) moved, "That a vote of thanks be accorded all the gentlemen who had read papers."—Carried unanimously.

The Conference then adjourned till 2 p.m.

Mr. Butler (Westland): Mr. Chairman, I should like to have an opportunity of contradicting the very discouraging remarks Mr. Trapp made in respect to the white-pine on the west coast of the South Island. In this case I feel, if I allow such remarks to go unchallenged, there will be an injustice done to the part I represent. Where Mr. Trapp got his information from I do not know. I am sure he did not speak in any way biased; but I wish this fact to be recorded, that early in the year we sent two cargoes to a gentleman who had previously obtained supplies from Kaipara, and he was so satisfied with the timber we sent that he ordered a further one million and a half feet.

Mr. Trapp (Auckland): I did not refer to the quality of your wood, but the way it was landed; the climate must be against it. I am sorry if you understood me otherwise. The timber that you sent at the start of your business from Greymouth was not cut well nor seasoned; and I think everybody in Greymouth, if you were there at the time, would tell you the same. I say your timber is better adapted in certain ways than that in the North. The grain is different, and it might be used for many purposes which that of the North is not useful for. I do not complain about the quality; I complain about the style in which it was shipped to Melbourne. The quality of your white-pine is good, the same as that that came from Hawke's Bay; but the way that you sent it is the drift of the whole of my remarks: that you do not season it, and that you do not pay attention to it when this is done. Mr. Blair, I think, can bear me out on that if he is present—viz., that a lot of the stuff sent from the West Coast was absolutely unseasoned and not fit to be sent. I think that Mr. Jay, even, himself admitted that it contained more moisture in it than the North. Mr. Bagnall will tell you that the timber from your coast, although a good timber, has never had justice done to it by the way you ship it, and that is the whole *crux* of this Conference—viz., to get into the way of preparing your timber for the export market. I never said anything about your timber being bad; but I think you should give the timber a show, and not ruin the market by trying to ship it before is properly prepared.

Mr. R. W. England (Canterbury): Mr. Chairman, I have been using and selling white-pine for thirty-five years, and I must confess that the best timber I have had has been from the West Coast. I was going to say that, as far as my knowledge goes of loading white-pine, we have come to the conclusion in our district that it must be loaded either thoroughly wet from the saw and the bush, or it must be loaded very dry, because it has got a skin on it, and you will find it gives a good deal more waste in that state than any other. We have had any quantity of boards sticking together. Taking it which way you like, the timber from the West Coast is better than the Northern timber.

Mr. Butler (Westland): Mr. Chairman, now that Mr. Trapp has made himself clear on this point, and that the remarks he made applied only to the shipping, and not to the timber as well, I am quite satisfied.

Mr. Trapp (Auckland): Mr. Chairman, I think Mr. Jay will bear me out when I say that the timber on the West Coast is an extremely good timber; but they have not done it justice in the way they have prepared it for the export trade.

Mr. Jay (Westland): I understand you to say, as far as the quality of the timber is concerned, it is as a tree equally as good as the timber in the North Island, providing that it is cut and prepared in a proper manner for export. Unless it is prepared in a proper manner for export it is utterly useless. It should be thoroughly dried and seasoned before it can be shipped.

The Chairman: I myself have refrained from making any remarks upon the timber, because I think the buyers have as good an idea of the timber as anybody else. We, as sawmillers, have always tried to send the best timber; but, when buyers are pushing you, you cannot always have time to do that. With white-pine it is really very important that it should be seasoned. For a short voyage, if it is green, it will turn out all right, but if it has got to go any long distance, it will not.

REPORT OF NO. 2 COMMITTEE.

Messrs. H. W. Smith, Brownlee, H. Cornfoot, H. Brown, G. Mackie, W. L. Luxford, W. Morris, J. Butler, McCallum. Mr. H. W. Smith was appointed chairman, Mr. W. L. Luxford was appointed secretary.

After several meetings and careful consideration the committee submitted the following report:—

Leasing Crown Lands.

1. The royalty system, as arrived at from returns of timber actually cut by the mill, is the most satisfactory in respect of avoiding all conflict of opinion between valuator and buyer, whereas, the valuation-and-purchase system induces more methodical and thorough clearing-out of all sawmilling timber from the area surveyed, and also constrains the sawmiller to find, where possible, markets for off-cut, &c., which under the royalty system might be neglected.

The system of survey and sale by auction is distinctly objectionable, inasmuch as large companies and syndicates are thereby enabled to successfully pursue a policy of outbidding and over-weighting persons of more limited capital.

Recommended, That the kauri and other timbers in North Island bush be put upon the same footing in respect of sawmilling areas as prevails in the South Island, and that there be as much uniformity as possible in the method of dealing with all the bush areas in the colony, giving general preference to the royalty system arrived at from returns of timber actually cut.

2. *Recommended*, That royalty should be appointed according to the nature of the ground, and should be less for hilly ground, the reason being that the ground is much more expensive to work,

the timber costing not less than 6d. per 100ft. extra to remove off the hill; distance from rail or water carriage should also be taken into consideration in valuation of bush.

3. *Recommended*, That instead of the limit of area being on an average basis it should be based on quantity; and that the minimum should be 4,000,000—that is, equal to 200 acres at 20,000 per acre; and that the survey should be on this basis, and further reserve should consist of three similar areas.

4. *Recommended*, That all Crown lands suitable for sawmilling should be reserved for timber purposes, and should not be cut up for settlement until after the sawmiller has utilised all timber fit for sawing.

5. *Recommended*, That the Government devise some means by which the sawmiller may be enabled to lease lands from the Natives for the purpose of removing the timber.

6. *Recommended*, That, in the case of a mixed bush, where one particular description of timber has been cut out on one area the miller should have the right of cutting on the next area; also, should any small area of isolated timber be available for any particular mill, the same shall be allowed to be cut under the supervision of the Ranger.

7. *Recommended*, That in cases of mills working on Midland Railway reserves from which at present the Government are receiving royalties it is proposed to ask the Government to protect such millers to the extent of granting them permission to record their applications for areas of timber lands, so that in the event of the reserves reverting to the Crown they would have a preferential right to timber growing on lands adjacent to such mills.

Railway Tariff.

We find that, by the extension of roads and railways, the bush-lands of the colony have now been made so accessible that it has had the effect of inducing a number of persons to embark in the timber industry, until it has now become a battle for existence; and unless something be done as early as possible to find new markets for the increased production a number of the weakest mill-owners will be compelled to give up the contest, thereby entailing a very serious loss upon themselves and the colony. With a view of removing this undesirable state of affairs it is proposed to try foreign markets. In entering upon this business it is patent that a good article must be produced, and at the lowest price possible, to enable us to obtain an opening. We feel sure that the Government will give us every assistance in their power in what we have no hesitation in saying is the most important industry in the colony. From the nature of the article of our manufacture, freight and wharfage dues enter very largely into the cost. Seeing the very large interest at stake, we very respectfully ask the Government to help us in this matter by carrying all timber, including white-pine for butter-boxes, &c., manufactured in the colony for export from the colony, under Classes F or Q of the railway regulations, and also by granting a reduction of jetty dues wherever such are under Government control. We also beg to call your attention to the very high rates charged to inland stations in contrast to places which have the advantage of water-carriage in competition with the railways. The increased price to inland stations no doubt tends very considerably to lessen local consumption. We would also remind the Government that they do no loading or unloading, take no responsibility whatever, no covers or covered wagons required, unless for seasoned and manufactured timbers. We also beg to call your attention to the very unfair regulation under which rusticated weatherboards, tongued-and-grooved flooring and lining, and timber of irregular width and thickness are measured.

We also find that before we can hope for any success to be obtained in exporting timber to foreign countries it must be thoroughly seasoned, and to do this a very considerable outlay has to be incurred for drying-sheds. To partially recoup sawmillers for this large outlay we suggest that timber so treated should be carried under Class Q.

We also recommend that where green timber has to be railed to drying-sheds, the charges be held over until the timber is removed from the sheds for export.

That the Government be requested to retain a sufficient number of flat trucks for the timber business, as being the most convenient for loading.

Local Timber Trade.

Recommended, That the Government be requested to establish a Timber Industry Board, with annual sittings in Wellington, such Board to consist of delegates from sawmillers and timber merchants, and also one or more representatives of the Government. The constitution of this Board would greatly stimulate the formation of local associations in the various timber districts, thereby bringing all engaged in the industry in close touch with the Government and with one another.

That, whereas sawmillers in many cases experience great difficulties in obtaining tramway rights along public roads and through private lands, the Government be requested to introduce a measure dealing with the matter, and in the case of Crown lands extending the present term of five years to twenty-one years if required, and that any future sales of Crown lands likely to be effected should be made subject to tramway rights.

The various sizes of timber specified by different architects and builders is a source of great loss to the sawmillers, and we would suggest that a conference of architects be called to determine a stock list of sizes of timber, and we would also suggest that the sawmillers at the present Conference take steps to obtain uniform patterns of flooring and lining.

Recommended, That, with a view to the introduction of improved machinery, steps be taken to obtain and distribute among sawmillers all information relating to same.

Recommended, That the Government be advised to admit all sawmilling machinery duty-free.

HENRY W. SMITH, Chairman.

The report was then considered :—

Leasing Crown Lands.

Clause 1. "The royalty system, as arrived at from returns of timber actually cut by the mill, is the most satisfactory in respect of avoiding all conflict of opinion between valuator and buyer; whereas the valuation and purchase system induces more methodical and thorough clearing-out of all sawmilling-timber from the area surveyed, and also constrains the sawmiller to find, where possible, markets for off-cuts, &c., which under the royalty system might be neglected.

"The system of survey and sale by auction is distinctly objectionable, inasmuch as large companies and syndicates are thereby enabled to successfully pursue a policy of outbidding and overweighting persons of more limited capital.

"*Recommended*, That the kauri and other timbers in North Island bush be put upon the same footing in respect of sawmilling areas as prevails in the South Island, and that there be as much uniformity as possible in the method of dealing with all the bush areas in the colony, giving general preference to the royalty system, arrived at from the returns of timber actually cut."—Adopted.

Clause 2: "*Recommended*, That royalty should be appointed according to the nature of the ground, and should be less for hilly ground, the reason being that the ground is much more expensive to work, the timber costing not less than 6d. per 100ft. extra to remove off the hill; distance from rail or water-carriage should also be taken into consideration in valuation of bush."

Mr. Malfroy (Westland) proposed, and Mr. Jay (Westland) seconded, "That this clause be struck out."

Mr. D. Goldie (Auckland): Mr. Chairman, I beg to enter my protest against your dealing with this question, which is outside the order of reference.

The Chairman: Mr. Goldie is quite right. Sawmilling, as referred to there, refers to the manipulation of the timber. Mr. Goldie's protest will be recorded.

The clause was then struck out.

Clause 3: "*Recommended*, That instead of a limit of area being on an acreage basis, it should be based on quantity, and that the minimum should be four millions: that is, equal to 200 acres at 20,000 per acre, and that the survey should be on this basis; and further reserves should consist of three similar areas."

Mr. Trapp (Auckland) moved, and Mr. Bartholomew (Wellington) seconded, "That this clause be struck out."—Carried.

Clause 4: "*Recommended*, That all Crown lands suitable for sawmilling should be reserved for timber purposes, and should not be cut up for settlement until after the sawmiller has utilised all timber fit for sawing."

The Chairman: I think this clause might be withdrawn.—Agreed.

Clause 5: "*Recommended*, That the Government devise some means by which the sawmiller may be enabled to lease lands from the Natives for the purpose of removing the timber."—Adopted.

Clause 6: "*Recommended*, That in the case of a mixed bush, where one particular description of timber has been cut out on one area, the miller shall have the right of cutting on the next area; also, should any small area of isolated timber be available for any particular mill, the same shall be allowed to be cut under the supervision of the Ranger."—Adopted.

Clause 7 was amended to read as follows: "*Recommended*, That in cases of mills working on Midland Railway reserves from which at present the Government are receiving royalties, it is proposed to ask the Government to protect such millers to the extent of granting them permission to record their applications for areas of timber lands, so that in the event of the reserves reverting to the Crown, they would have a preferential right to timber growing on lands adjacent to such mills according to the regulations in force."—Adopted.

Railway Tariff.

"We find that by the extension of roads and railways the bush-lands of the colony have now been made so accessible that it has the effect of inducing a number of persons to embark in the timber industry, until it has now become a battle for existence, and unless something be done as early as possible to find new markets for the increased production a number of the weakest mill-owners will be compelled to give up the contest, thereby entailing a very serious loss upon themselves and the colony. With a view of removing this undesirable state of affairs it is proposed to try foreign markets. In entering upon this business it is patent that a good article must be produced, and at the lowest price possible, to enable us to obtain an opening. We feel sure that the Government will give us every assistance in their power in what we have no hesitation in saying is the most important industry in the colony. From the nature of the article of our manufacture, freight and wharfage dues enter very largely into the cost. Seeing a very large interest at stake, we very respectfully ask the Government to help us in this matter, by carrying all timber, including white-pine for butter-boxes, &c., manufactured in the colony for export from the colony, under Classes F or Q of the railway regulations; and also a reduction of jetty dues where such is under Government control. We also beg to call your attention to the very high rates charged to inland stations in contrast to places which have the advantage of water-carriage in competition with railways, the increased price to inland stations no doubt tending very considerably to lessen local consumption. We would also remind the Government that they do no loading or unloading, and take no responsibility whatever; no covers or covered wagons are required, unless on seasoned and manufactured timbers. We also beg to call your attention to the very unfair regulation under which rusticated weatherboards, tongued-and-grooved flooring and lining, and timber of a regular width and thickness, are measured.

"We also find that, before any success can hope to be obtained in exporting timber to foreign countries, it must be thoroughly seasoned, and to do this a very considerable outlay has to be incurred for drying-sheds. To partially recoup sawmillers for this large outlay, we suggest that timber so treated should be carried under Class Q.

"We also request that, where green timber has to be railed for drying-sheds, the charges be held over until the timber is removed from the sheds for export.

"That the Government be request to retain a sufficient number of flat trucks for the timber business, as being the most convenient for loading."

Mr. Leyland (Auckland) moved that this clause be adopted as read.—Agreed.

Local Timber Trade.

Clause 1: "*Recommended*, That the Government be requested to establish a Timber Industry Board, with annual sittings in Wellington; such Board to consist of delegates from sawmillers and timber-merchants, and also one or more representatives of the Government. The constitution of this Board would greatly stimulate the formation of local associations in the various timber districts, thereby bringing all engaged in the industry in close touch with the Government, and with one another."—Adopted.

Clause 2: "That, whereas sawmillers in many cases experience great difficulties in obtaining tramway rights along public roads and through private lands, the Government be requested to introduce a measure dealing with the matter; and, in the case of Crown lands, extending the present term of five years to twenty-one years if required, and that any future sales of Crown lands likely to be effected should be made subject to tramway rights."—Adopted.

Clause 3: "The various sizes of timber specified by different architects and builders is a source of great loss to the sawmillers; and we would suggest that a conference of architects be called to determine a stock list of sizes of timber; and we would also suggest that the sawmillers at the present Conference take steps to obtain uniform patterns of flooring and lining."—Adopted.

Clause 4: "The Committee consider that a special telegraph code would be of great assistance to the trade."

Mr. Trapp (Auckland): Mr. Chairman, I think sawmillers ought to make out their own code; and to have a universal one throughout the whole of New Zealand is asking the Government to do something that would not cost them a night's work.

Clause 4 withdrawn.

Clause 5: "*Recommended*, That, with a view to the introduction of improved machinery, steps be taken to obtain and distribute among sawmillers all information relating to same."—Adopted.

Clause 6: "*Recommended*, That the Government be advised to admit all sawmilling machinery duty-free."

Mr. Trapp (Auckland): I think, gentlemen, that you ought to consider if there is any duty on timber coming into New Zealand. You want to be protected against that, and yet you do not want to protect your ironfounders and others. If you are going to ask for your machinery to be admitted free, you should certainly ask the Government to take off the duty on imported timber at the same time. This machinery, of course, you will import; but ought not you to give some preference to your local people?

Mr. H. W. Smith (Auckland) asked to withdraw this clause, which was agreed to.

The report as amended was then adopted.

TELEGRAM.

Mr. Butler (Westland): Mr. Chairman, I have received a telegram from my partner, which I will read to the Conference, and which I think might be recorded:—

"Joseph Butler, City Buffet, Wellington.

"SUGGEST Timber Trade Journal be issued under Industrial Department.

"BUTLER, Stillwater."

BY-PRODUCTS COMMITTEE.

Mr. Lightband (Nelson), Chairman, brought up the report of the Committee, which is as follows:—

Your committee beg to report as follows:—

1. As regards the production of bark, a close season for cutting timber would seriously affect this industry, as the stripping season commences in October and terminates at end of January.

The only barks that are in demand, and can be obtained in commercial quantities, are the black and brown birch (*Fagus fusca*), sometimes known as the tooth-leaf beech, and the towai and tawhero. We find that these barks have been tested here, and are highly approved for the manufacturing of upper-leather.

Re haulage of bark, we find the Government are already treating this matter in a liberal spirit.

2. That the Government be requested to place, say, five tons on the London market, through Messrs. Powell, of London, and Messrs. Paul, of Leeds, in order to test its value in the English markets.

3. In regard to tree-planting, the wattle is strongly recommended as suitable for planting in the North Island only, the South Island being unsuitable from its colder climate, the winter frosts killing the trees before they can arrive at the age and size to pay for stripping.

4. *Wood-pulp*.—This industry could not be carried on at a profit under present circumstances. A pulp-mill to make 10 tons of pulp per day would cost, erected in New Zealand, from £30,000 to £40,000, and, as the pulp when manufactured would have to be shipped to foreign markets, where labour and the cost of machinery would be considerably cheaper than here, its manufacture in this colony could only result in a loss.

5. *Sawdust*.—We are pleased to state that the Kauri Company, of Auckland, intend sending Home a quantity of both kauri and kahikatea sawdust to a large pulp-making firm, in order to test its value. We find that the use of sawdust for sanitary and disinfecting purposes is highly recommended.

6. As to the utilisation of one of our waste products, it may be mentioned that the wood-ash from the engines at our mills is now being sought after for the manufacture of potash, and Dr. Levinge is now collecting this material from mills in the Dannevirke district, with the intention of testing its properties, which, if satisfactory, it is proposed to erect suitable plant for the treatment of the crude material.

7. Other secondary products, as charcoal, tar, pitch, lampblack, resin, and turpentine, have been dealt with in an able report by Professor Kirk, and your committee think it unnecessary to refer further to them.

M. LIGHTBAND, Chairman.

The report was then considered:—

Clause 1: "As regards the production of bark, a close season for cutting of timber would seriously affect this industry, as the stripping season commences in October and terminates at end of January. The only bark that is in demand and can be obtained in commercial quantities are the black- and brown-birch (*Fagus fusca*), sometimes known as the tooth-leaved beech, and the towai and tawhero."—Adopted.

Clause 2: "That the Government be requested to place, say, five tons on the London market, through Messrs. Powell, of London, and Messrs. Paul, of Leeds, in order to test its value in the English markets.

"We find that these barks have been tested here, and are highly approved for the manufacturing of upper leather.

"In regard to tree-planting, the wattle is strongly recommended as suitable for planting in the North Island only; the South Island being unsuitable from its colder climate, the winter frosts killing the trees before they can arrive at the age and size to pay for stripping.

"*Re* haulage of bark: We find the Government are already treating this matter in a liberal spirit."—Adopted.

Clause 3: "Wood-pulp: This industry could not be carried on at a profit under present circumstances. A pulp-mill to make ten tons of pulp a day would cost, erected in New Zealand, from £30,000 to £40,000, and, as the pulp, when manufactured, would have to be shipped to foreign markets, where labour and the cost of machinery would be considerably cheaper than here, its manufacture in this colony could only result in a loss."

The Chairman: This agrees with my own experience. I asked a friend of mine who was going to England some years ago to inquire the cost of producing a mill for wood-pulp; and the report was it would take from £25,000 to £30,000 according to the quantity that you chose to go in for, and its bulk when it is reduced to the pulp, and the freight, would be considerable. We cannot compete with the countries where they have so much cheaper labour.

Clause 3 was then adopted.

Clause 4: "Sawdust: We are pleased to state that the Kauri Company of Auckland intend sending Home a quantity of both kauri and kahikatea sawdust to a large pulp-making firm, in order to test its value. We find that the use of sawdust for sanitary and disinfecting purposes is highly recommended."

Mr. Trapp (Auckland): Mr. Chairman, as regards this white-pine sawdust, some seven or eight years ago, Mr. Syme, of the Melbourne *Age*, and one or two others, got some kauri and white-pine sawdust, and sent it Home to have it tested, but they found out they could not bleach it. We are going to send some more Home to see if it can be bleached. If so, there may be a demand for it.

Mr. Goldie (Auckland): Mr. Chairman, I think the sawdust referred to in the clause means kauri sawdust. It is used for the curing of hams in Melbourne and Queensland. There they take it in regular quantities every fortnight for packing the hams. In Auckland it is used for bedding for horses, but in Queensland and Melbourne they will not take the white-pine dust at all, they must have the kauri sawdust.

The clause was then adopted.

Clause 5: "As to the utilisation of one of our waste products, it may be mentioned that the wood-ash from the engines at our mills is now being sought after for the manufacture of potash, and Dr. Levinge is now collecting this material from mills in the Dannevirke district with the intention of testing its properties, which if satisfactory, it is proposed to erect suitable plant for the treatment of the crude material."

Mr. Prouse (Wellington): Mr. Chairman, We use all our ashes to put on paddocks, and we had a good crop last year. The previous year we had about eight tons of oaten straw, and this year we had about fifteen tons, so I can state that in wood-ash you have a good manure.

Mr. Mackie (Southland): Mr. Chairman, Dr. Levinge treated ashes from my engine and I believe there is very little difference in the ashes as a manure either after or before treatment.

The clause was then adopted.

Clause 6: "Other secondary products, as charcoal, tar, pitch, lampblack, resin, and turpentine have been dealt with in an able report by Professor Kirk, and your committee think it unnecessary to refer further to them."—Adopted.

The report was then adopted.

The Chairman: It will be necessary to have the proceedings of the Conference carefully gone over and a report arranged and handed to the Government. I think it will be necessary to appoint some person who will undertake to do this, and I think we ought to pass some thanks to the Government for calling this Conference together.

Mr. D. Goldie (Auckland) moved, "That Messrs. L. J. Bagnall, V. B. Trapp, and J. Butler, be appointed as a committee to draw up a report to be submitted to the Government."—Agreed.*

Mr. Trapp (Auckland): Mr. Chairman and gentlemen, at the start of this meeting there seemed to be a little bit of misunderstanding. I asked Mr. Seddon that Mr. Bagnall should be president of this Conference, and myself to take the position of vice-president. I think, really, that the way Mr. Bagnall has carried out the duties is such that it ought to be his position as president, and, of course, I should like the position of vice-president. Now, as regards this Conference, I think it will do an immense amount of good, and it has done good in many ways. It has shown to the Government that the builders and sawmillers are not people to go to them and ask them to help them in everything. The fact is, all we want is to give the sawmillers and merchants a chance of carrying out their business without so-called experts getting the ear of the Government, and asking them to pass a law which, if it were passed, would mean an immense loss, and half of us would have to shut down. I think, for my own company, we could not carry on if all these laws were passed. We are told that the laws are absolutely going to be framed; and yet neither of these would-be experts can tell us the reason why they have asked the Government to pass these laws. You will find a man come into your bush and say he is going to take part of this bush and give you 3d. royalty—that is, he may say kauri-trees are worth 3d. a hundred—you may as well close down. We must ask the Government not to pass any laws that are retrospective, and will injure and take our timbers from us. With us (the Kauri Timber Company) it means ruination, and also to the timber trade. We have to thank Mr. Seddon very much for bringing us here; and I think this Conference will do an immense amount of good. I have gained a great deal of information during these five days which will be of great value to me in the future. This Conference will show the Government that the timber industry is the soundest one they have got, and the only industry that has not come to them with their cap in hand to help them in every mortal thing. I move that a vote of thanks be tendered to the Premier for calling the Conference together.—Carried unanimously.

Mr. D. Goldie (Auckland) moved, "That the thanks of this meeting be conveyed to the Premier for his forethought in appointing so able and courteous an officer as Mr. A. M. Smith to assist us in making this Conference the success it has been."

Mr. Lightband (Nelson) said he had great pleasure in seconding the motion, and he thought this Conference must have entailed an enormous amount of work on the part of Mr. A. M. Smith. He was sure that he had undertaken it willingly, and also that he had done his utmost to aid the Conference, and he (Mr. Lightband) thought that this vote should be no mere formal vote.—Carried unanimously.

Mr. A. M. Smith, in reply, said: Mr. Chairman and gentlemen, I beg to thank you very much indeed for the kind words you have expressed towards myself. It was a very great pleasure to me that Mr. Seddon called this Conference together because, during the two years I have been in the Industries and Commerce Department, I have felt that those interested in the timber trade were all pulling different ways, and that something was necessary to be done to effect a change for the better. I am confident that a great deal of good will be achieved through this Conference, and I am quite sure that, if this is so, no one will be better pleased than the Premier.

Mr. J. Butler (Westland) moved, "That a vote of thanks be passed to Mr. G. S. Perrin for his attendance, and the information he had given to the Conference."

Mr. W. Morris (Westland), in seconding the motion, said it was gratifying to have a gentleman of Mr. Perrin's experience amongst them, and he was only sorry that that gentleman could not have been with them sooner.

The Chairman: Gentlemen, I think the best way to put the motion would be "That the Victorian and Tasmanian Governments be thanked for representing this Conference through Mr. G. S. Perrin."—Carried unanimously.

Mr. Perrin (Victoria): Mr. Chairman and gentlemen, I am sure it gives me very great pleasure indeed to attend this Conference. I only regret that the notice given me was so short. It was on Friday week that a cable came through our Premier, who sent it on to the Minister of Lands, under whose department I am, and it was sent on to me late at night. I left on the following Tuesday by the "Waihora." This being the first boat to leave, I lost no time in coming over here. My chief difficulty was in not knowing exactly what the Conference was about, or what the conditions were, or what you wanted to know from me. I was somewhat in the dark. There were many things I would have liked to have brought over in connection with my work in Victoria, which, I think, would be of great use to your Government, but, perhaps, not so much of use to you as sawmillers. I think the question for the Government to do, as far as I am concerned, is more to decide upon the system of forestry which they intend to carry out, and there, I think, I can be of use to them. It is more on the forest aspect of the question that I can advise the Government later on. At present I know so little about New Zealand that I feel I am rather at a loss amongst you all, and I hope that in the few days I have at my disposal in New Zealand I shall be able to see some of your forests. I may say we have many methods of working in Victoria which, no doubt, would be of use to you, and when I see your work at the mills, perhaps I shall recognise the same system in vogue here as there. I can only express my extreme thankfulness at being selected to represent this honourable position. The Tasmanian Premier at the last moment cabled to our Government and asked me to act for them. I got the telegram ten minutes before I left Sydney, so that there was no time to do anything or to make arrangements, or to bring other papers which might have been of use to you here. I have on the table first of all a report on the woods and forests of Tasmania, which I am leaving with your secretary. I was for two years and a half Conservator of Forests in Tasmania, and I prepared, at the request of the Government, a report upon the systematic conservation of the woods and forests of Tasmania; and, to a very large extent, I would recommend your Government to follow some-

* Owing to Mr. Butler having to leave for the West Coast, it was arranged that Mr. Bagnall should draw up the report.

what upon these lines in any forest Bill or forest measures they may bring forward for the use of this colony. I have here a report on the State forests of Victoria, which is on almost similar lines, and also an article written by myself in a periodical called "Arts and Crafts." It is on Australian timbers. I give the list of timbers for bridges, railway-work, and ordinary building material. I am leaving these documents here, and I think from this you will gather just as much as if I had been talking on them for the last two or three hours. I thank you very heartily indeed for the manner in which I have been received, and I am very greatly impressed by what I have heard to-day. I regret very much indeed that I was not present during the first three or four days of your Conference. I feel that wherever I go I am always learning, and I hope that the few days that I have amongst you I will see a great deal more of the methods of working your timbers.

Mr. Baker (Hawke's Bay): Mr. Chairman, I think we should be lacking in courtesy not to mention the name of Professor Kirk, who has been really at the beck and call of every committee, and whose work has been very much canvassed and discussed, and therefore I have very great pleasure in proposing a vote of thanks to that gentleman.

Mr. Perrin said he had great pleasure in seconding the motion, and, judging from Professor Kirk's work and whatever praise he was deserving of it should be fully accorded by those present. Professor Kirk had done good work, and he (Mr. Perrin) trusted he would long live to carry on.—Carried unanimously.

Professor Kirk, in reply, said: Mr. Chairman, I thank you, Mr. Perrin, and the gentlemen present for the very appreciative way in which you have been pleased to acknowledge such services that I have been able to render. I think Mr. Perrin and myself would together say that the work has had attractions for us during all the time we have been engaged in it which no other work would have had. It has had a hold on us, and has, I think, taken up our best efforts and our most earnest persistence. I sincerely hope, and I do not doubt, that this Conference will result in very good work indeed. I feel now that the question of forest conservation and forestry in its wider sense is in a position which it has never before attained in New Zealand. I do not think that the Government will feel disposed to ignore the recommendations that will be made, and I thank you very much for the appreciative way in which you have been pleased to speak of me.

Mr. A. Falconer (Wellington) proposed, and *Mr. W. L. Kennedy* seconded, "That a vote of thanks be accorded to the chairman for the able way in which he had conducted the business of the Conference."—Carried unanimously.

The Chairman, in reply, said: Gentlemen, I thank you very much for your kind expressions. My position as chairman has been a labour of love for me. If I have said anything that has been in any way severe I trust you will overlook it. I think you have conducted yourselves in such a way as will reflect great credit upon the Conference. I think even Parliament could not have been conducted in a better way.

Mr. Prouse (Wellington): Mr. Chairman, before the Conference disperses, I would like to say, as the members have decided to accept the invitation to go to Levin to-morrow on a visit to Mr. P. Bartholomew's mill, I wish to extend an invitation to them to visit our mill also, and see our process for drying timber, which carries out the purpose for which it was erected splendidly. (Applause.)

The Conference then dispersed.

THE AMERICAN BAND-SAW.

ON the following morning, Thursday, July 23rd, at the invitation of the Premier, the following members of the Conference who could avail themselves of the trip left town by special train on a visit to Messrs. P. Bartholomew and Prouse Brothers' mills at Levin: Hon. T. Thompson (representing the Government); Messrs. V. B. Trapp, President; L. J. Bagnall, Vice-President; G. S. Perrin, F.L.S. (Victoria); P. Bartholomew, Levin; John Waller, Christchurch; R. W. England, Christchurch; E. Larcomb, Palmerston North; W. M. Bell, Hokitika; J. C. Malfroy, Hokitika; W. Morris, Greymouth; D. McLeod, Hastings; R. Dickson, Blenheim; C. Nees, Okaramio; T. H. Ker, Christchurch; W. Brownlee, Havelock; J. Macfarlane, Tapanui; W. F. Greenaway, Hawke's Bay; F. Jenssen, Hawke's Bay; J. Butler, Greymouth; W. Jack, Southland; G. Mackie, Southland; A. McCallum, Southland; D. Macgregor (Cooper and Co.), Invercargill; T. D. Scoullar, Wellington; W. L. Bailey, Upper Taonui; T. Potts, Hokitika; W. Marris, Westport; C. Seabrook, Greymouth; B. L. Knight, Hastings; G. Malbin, Southland; J. H. Dawson, Invercargill; G. Adsett, Pohangina; W. G. Haybittle, Feilding; H. J. Matthews, Dunedin; H. Burger, Kumara; E. Snowball (Sash and Door Co.), New Plymouth; W. L. Kennedy, Stratford; J. McConnon, Kumara; H. Carlson, Dannevirke; C. White, Blenheim; J. Jay, Westland; J. Prouse, Levin; W. L. Luxford, Manawatu; J. Russell, Wellington; J. Murdoch, Wellington; J. Stewart, Wellington; James Freyberg, Wellington; also Mr. A. M. Smith, Secretary to the Conference.

On arriving at Levin, Mr. Peter Bartholomew conducted the visitors to his mill, where the band-saw was found to be in full swing. The machine is of American design, and was probably at the time of invention a great innovation on all known methods for cutting, inasmuch as it was supposed that band-saws could only be made 1in. wide; now they are made up to 6in. and 9in., and proportionately long. It passes over two large wheels, and revolves at a rate sufficiently fast to cut, when driven at full speed, 20ft. in thirteen seconds. This must not be supposed to be the most perfect machine of the present day, as quite recently a Swiss has invented a saw working horizontally, which produces sawn timber at a speed very nearly double that of the American machine, although the cost is very much greater. Mr. Bartholomew's saw can work with saws.

as thin as 19-gauge, and cut from ten to fifteen times as much as that of the horizontal, or single-blade, frame; while, as compared with the rack circular-saw bench, the new band-saw will turn out considerably more work, wastes only one quarter of the wood, and requires vastly less power. So rapid has been the progress of invention recently with this description of saw, that a new patent saw-sharpening machine has been specially brought out to work in conjunction with band-saws. This machine can sharpen the teeth automatically at the rate of 100 teeth per minute. A difficult question to deal with in connection with the machine was the sawdust, which necessarily accumulates very rapidly with the machine turning out so much work. To meet the difficulty, a series of fan lifts was devised, running up a slope, and this removes the dust as fast as it is made, and delivers it on a truck some distance off for removal. All this is done automatically by self-acting gear, and, of course, simplifies the arrangement. It is necessary to mention saws varying in gauge are sold with these machines so that rough kind of timber can be cut as easily as the very finest description of wood, and mechanical appliances are supplied for mending broken saws. Of course the saws have to be changed about every few hours for sharpening, but this is done by a skilled artificer engaged at the mill. Altogether the arrangements of this description of machinery, although apparently complicated, are really very simple, and add very much to the facility with which large timber can be broken up and converted for the builder's use. The travelling table, which carries the log, is of a simple and strong description—viz., consisting of wrought-steel girders, rigidly connected. The return action of the carriage is, of course, much more rapid than the forward, and by the American system, the belts can if required be driven direct from a portable engine. These also, if broken, are mended by a simple contrivance. One drawback to this machine is the absolute necessity for one man being on the watch constantly to attend to the brake, and alteration of gear. Although this machine is exceedingly simple, it provides employment for a large number of men in furnishing the wood it consumes. The machine was well worth going to Levin to see, and it was mentioned that Mr. Bartholomew has expended quite £2,000 in setting up this plant.

MESSRS. PROUSE BROTHERS' MILL.

Having inspected Mr. Bartholomew's mill, a large number of the gentlemen present crossed over to Messrs. Prouse Brothers' premises, which are within a stone's throw of the former. Special interest was taken in the method of seasoning timber, which was explained by the proprietors, and which was highly commended by the visitors. The timber is placed upright in roofed but open-sided sheds, being separated by horizontal stacking-sticks. It was explained that the timber stacked in this manner dried more quickly and was less liable to warp than if stacked in the usual manner—namely, on the flat. In a small building devoted to this purpose, some hundred thousand feet of flooring and lumber was stacked, the space required being even less than by the usual methods. The mill differs but slightly in general arrangement from those in the immediate district, but every labour-saving appliance for the handling of timber has been utilised. At the time of the visit, Messrs. Prouse Brothers were engaged in preparing rata cross-bars for telegraph posts, having a very large contract for the supply of these on hand.

After having thoroughly inspected the mills, all the gentlemen present adjourned to Mr. J. G. Campbell's Hotel, where luncheon had been provided, after which the party started on their return journey for town, reaching Wellington at 5 p.m.

A P P E N D I X .

EXPORTATION OF KAURI TIMBER.

[By Mr. R. BLAIR.]

WITH regard to this portion of the industry, it may be stated that the various markets are Australia, Tasmania, Cape, United Kingdom, and the Continent.

In treating of Australia, the demands upon the cutting-capacity of those engaged is taxed to their full extent. This is due to the general improvement in trade that has taken place, but more particularly in Victoria, where the imports show the largest increase.

Tasmania.—This market is of a limited character, the demand having been of a regular character for some years past.

Cape.—To this port within the last eighteen months three cargoes have been shipped, aggregating 800,000ft. super., but these have been direct orders, not consignments; and in my opinion it would be very unwise to ship in the latter manner. The trade in kauri being recent and of a limited character, one cannot say how it may develop, but the quantity already mentioned should prove ere long whether there will be a permanency or otherwise.

United Kingdom.—The requirements from this quarter have increased very considerably, while the regularity of shipments, together with forward orders, has proved the stability of the market at payable prices. For London it has been conclusively proved that cargoes are unsuitable, and shipments should only be made of a moderate character, per steamer or sailer loading general cargo from the Port of Auckland.

France.—There is every probability of a demand from this country, to which a small shipment is now being made; but at present one cannot say what developments may be made.

The markets already mentioned (excepting France and the Cape) are, in my opinion, absolutely established, so that, with regard to any assistance from the Government by those engaged in the kauri export trade, it is not required.

The developments of other markets is a question that must be left to those engaged in the trade for their own consideration, but the markets now being exported to keep the sawmillers engaged to their full cutting-capacity.

HOW TO OBTAIN FOREIGN MARKETS FOR NEW ZEALAND TIMBER.

[By Mr. B. B. TRAPP.]

THE only timber well known in other parts of the world is kauri, which has taken money and time to introduce. If we can profit by the experiences of those who introduced this timber, several of your timbers should be introduced to outside markets without much loss. Being an importer of your timbers, I can give certain information which I trust will be valuable and lead to your obtaining foreign trade without any unnecessary loss. I may be somewhat severe in my remarks, but certain of the millers deserve it, for many shipments of white-pine have arrived in Australia in not only a sweated condition, but badly cut. The result of such shipments has been disastrous not only to the importer, but to the exporter. If you send to foreign markets timber in the same condition you can never hope to create any trade. The reason of this is, your woods must necessarily come into competition with those imported from other places as a natural consequence when you try to secure trade. Do not send yours so as to land in an unsound condition, as those whom you are coming into competition with, will make the most of the unsound condition in which yours is landed, and, as theirs is truly cut, ends trimmed, it looks a far superior article to your own.

White-pine: This has made great strides in Australia, more especially in Victoria, the chief reason being its adaptability for butter-box manufacturing; and, to give you some idea of the extension of this trade, we expect over 14,000 tons of butter to be exported this coming season. Take forty boxes to the ton, and 8ft. to the box, and you will find it will require for this trade alone over three and a half million feet of timber.

To give you a better idea of how the trade in white-pine has extended in Victoria, I take from the timber returns of the colony the consumption for the last four years. Before this the imports were so very small it was not considered necessary to keep the returns: For the year ending 30th June, 1893, 1,226,031ft. super.; 30th June, 1894, 3,131,000ft. super.; 30th June, 1895, 4,898,000ft. super.; 30th June, 1896, 6,320,000ft. super. In four years it has increased five times, and at times, to fill the vessel, other sizes were sent, and, for certain purposes, it has been gaining ground. If you would season and mill this timber properly it would, I think, still increase in consumption.

I spoke to you about the sweated condition. The reason of this is it was in many instances shipped straight from the saw, and even when they had taken the trouble to partly season it was shipped in the rain. This timber should be stacked at least three months before shipment, and then only shipped in dry weather. If this were followed out—and I trust through this Conference some definite understanding will be come to as to supervision before shipment—I feel certain the price would rise, and the result be more satisfactory for all concerned. A great amount of carelessness has been shown in the milling of this timber. I am aware it shrinks very much, and different districts show different results in this way; but when, as has been the case, you get a board $\frac{3}{4}$ in. thick at one end and $1\frac{1}{2}$ in. at the other, also 12in. wide at one end and anywhere from $11\frac{1}{2}$ in. to 13in. at the other, it means those who manufacture the boxes do so at a great amount of extra expense. In one instance the Customs authorities came down and made them pay duty on the thicker ends, and the captain also made a claim, the consequence being the importers had to pay £40 on the cargo for timber they did not want, and then had to make an allowance to the box-manufacturers for bad milling. All timbers for export must be milled properly and seasoned if you desire to open up foreign markets; if you neglect this it would be better to keep your timber in New Zealand.

The way I would recommend you to secure, say, the English and foreign markets outside Australia, for I regret to see you call Australia foreign, would be to start sending small parcels by ordinary berth vessels, and to let them go through one hand, taking every care to see the agent appointed is an able man and one with considerable experience. Should he increase the trade to the satisfaction of those interested as regards price and demand, to keep the business with him, and pay no attention to inquiries from others; for if you do, and send to other agents, you bring your timber into competition against yourselves. When once you have established your trade, so that there is no fear of it decreasing, then it is time to think of selling to others. Be particular, most particular, that the timber sent is faithfully prepared as to seasoning and milling, for if you are not, then you can never hope to do any good. If you have an agent, and a good one, then be guided by what he writes as to the way the timber should be sent. Do not think you know better than the man on the spot who is handling it.

Be careful and not overship; it is better to starve the market a little than to glut it. Do not get excited if you obtain good prices, and want to send cargoes, for you will undo all the good which is being done.

I strongly urge great care in preparing the timber, as well as not overstocking the market. If you follow out carefully what I have stated, I firmly believe you will gradually get your woods known, and at prices which will be satisfactory to all and help to improve your own markets, as, having another good outlet, there will not be the need for the most unhealthy competition which now exists in your local trade.

THE sub-committee deputed to report upon the timber-export trade have the honour to submit for consideration that the cultivation of the export of timber outside of New Zealand must be nursed in every consistent manner in order to sustain the work of the existing mills, and utilise the large national sylvan patrimony of the colony for the good of the present and future generations. The colonial consumption may increase a little in proportion with the growth of the population, but is

utterly inadequate to a substantial exploitation of the valuable wooden estate, and to the producing-power of the existing mill plants in such form as to keep the many hands employed in a reasonable way, and so endow them with a comfortable living.

The qualities of timber that are abundant in the colony and susceptible of successful export are : Kauri, rimu, and white-pine, and possibly black-birch. The exportation of kauri has been made a success by the Kauri Company by means of expensive, laudable, and persistent efforts. White-pine has not produced a very profitable result, but there is every reason to assume that the failure is not due to uselessness of the article, but to demerit caused by the bad condition of several cargoes that have been exported ; still, there is now a considerable and increasing trade carried on with Australia, and there is no doubt that under proper care the exportation of this timber will attain a large importance at remunerative prices. The millers of the west coast of the South Island are making strong efforts to introduce the rimu in the African markets, and Mr. J. Jay, a member of our Conference, states that he went to the Cape with a cargo of this timber, and has no hesitation in saying that he has obtained a footing in that large market.

Black-birch has been tried in the London market, but without success. A cargo of 100,000ft. has lately gone to the Cape, but no returns are at hand yet. Persons of experience declare, however, that the dense quality of this wood will some day be acknowledged as fit for paving purposes. There is no cause to be disheartened by the difficulties met with in the past attempts at getting our timbers used in foreign countries. The kauri, good as the timber is acknowledged to be, was not accepted in England except after years of trial ; prejudice against unknown timbers, and vested interests in the existing grooves of trade, militate against us, but there is substantial reason to assert that the difficulties will soon vanish, provided that the greatest care be observed in the selection of timber for foreign markets. In the effort of defining consistent lines for facilitation of success in foreign markets, it may seem that the industry is asking too many concessions from the Government, but if the concessions are weighed carefully it will be found that they are trifling in substance as compared with the benefit that will be reaped by the colony in the big development of an industry that will employ a large population at fair wages, and that such development cannot be obtained without the assistance of foreign markets.

G. PERROTTI.

SILVER- OR YELLOW-PINES.

SILVER- or yellow-pine is the most valuable timber in New Zealand, being very durable, easily worked, and much more adapted for joiner's work than for being converted into sleepers. It is very limited in quantity, and is being destroyed at an alarming rate by axemen getting sleepers. For instance, if a tree measuring 12in. in diameter and 12ft. in length, which is a common size for silver-pine, were sawn by a miller 80ft. super. would be obtained, as against one sleeper measuring 23ft. from the axe, showing a loss of 57ft. Again, an axeman leaves half the crop of timber behind, which is often destroyed by fire started through carelessness in leaving camp-fires burning. Even if this does not happen the bush is left in such a state that it is not worth going over again. This waste of so valuable a timber has been much fostered by our Government calling tenders for *hewn* sleepers, to the exclusion of *sawn*.

With reference to birch in our districts, there are four marketable varieties, viz. :—

1. Brown-birch (*Fagus fusca*), which grows on low-lying flat lands, where the soil is rich, to a height of from 40ft. to 70ft., with a diameter of from 2ft. to 5ft. The matured wood is of a rich-brown or reddish colour, similar to totara, and with about the same specific gravity. It is used for bridges, sleepers, and all works where durability and strength are required. We consider this the best variety of birch. It compares very favourably with totara, being much stronger, if not quite so durable.

2. Black-birch (*Fagus fusca*), which generally grows on hill-sides and spurs, where its timber is sounder than when grown on the flat. It attains a height of from 30ft. to 60ft., with a diameter of from 18in. to 3ft. 6in. Black-birch is stronger than the last-mentioned variety, but is apt to split at the ends if left exposed to the sun, and is largely used for all Government works.

3. White-birch (*Fagus solandri*), which is very similar to *Fagus fusca*, grows on flat lands, and is not considered to be equal to it in quality.

4. Silver-birch (*Fagus menziesii*), which is a fine grown tree from 40ft. to 50ft. in height, with a diameter of often over 3ft. 6in., is found on the rich alluvial flats, near rivers. It is a good marketable timber, but is not so durable as any of the other varieties of birch.

Rimu : Of this timber little need be said, as every sawmiller in New Zealand must have had experience of its uses and qualities. We would simply point out its strength, durability, and the purpose for which it is largely used. Its weight in the green state is from 40lb. to 60lb. per cubic foot, and its strength, cross-section, is equal to that of English oak. The proportion of sap-wood to heart varies very considerably according to the size of the tree and the land on which it grows. A matured tree will have three-quarters of its diameter heart, while the young tree will be in the reverse proportion. Rimu is the staple timber of this country, and is used for every purpose, except where durability is essential.

White-pine is very plentiful, is of quicker growth, and attains a larger size than any of the foregoing timbers. We consider that, if proper care is exercised in seasoning, this will become one of our best timbers for export, as it is well adapted for flooring, shelving, lining, and general uses. Its appearance, which is better than that of American or Baltic pine, should recommend it in a foreign market. Our experience in the shipment *ex* "Rangitikei" was that white-pine sold better and sooner than the rest of the cargo.

A large quantity of our timber is being lost by the loggers and bushmen, who, to save themselves the trouble of cutting out a fault, will often leave more than half the timber of a tree to rot in the bush. With regard to conservation, both silver-pine and black-birch would not require

replanting, as they reproduce of themselves. The others we are not prepared to pass an opinion about, as we have not noticed the young trees coming on. We consider rimu to be of too slow growth to make it worth while replanting it to any extent.

In conclusion, we would emphasize that, to give our timber a chance, the greatest care must be exercised in preparing it for the foreign market.

JOHN MARRIS.
J. C. MALFROY.

[NOTE.—It was intended by Mr. Warner to read this paper, but, owing to the late sitting of the Conference on its last day of meeting, he was unable to do so. It is attached to the Appendix by the direction of the Hon. the Premier.—A. M. SMITH, Secretary to Conference.]

THE APPLICATION OF NEW ZEALAND TIMBERS TO JOINERY PURPOSES.

THE following paper was written without any pretension to a long or special experience with colonial timber, but more from a point of view obtained by nearly thirty years' employment in the carpenter and joiner's trade. I shall, in many instances I am afraid, come in contact with what appears the best interests of the sawmillers' business, but I trust that in most of these cases I shall be able to prove that my suggestions are far from being so dangerous as they may at first sight appear. In order to make myself explicit and to be as brief as possible, I will condense my remarks under three heads, which I will call "Felling," "Planking," and "Seasoning."

Felling.

On this question I shall, I fear, at once come to a direct issue with many of the sawmillers, as I consider it a most important matter that the time of early spring, when the sap and feeding-juices are most rapidly rising in the cells of the tree, should be strictly observed as a close season, always, of course, excepting the wattle and other bark-producing shrubs, which are rarely cut for the value of their timber. Most people are aware that in all the countries of the European Continent there is a special time observed for felling timber, that being when the sap is down; consequently, the log when felled contains the least possible amount of vegetable juices for the atmospheric influences employed in seasoning to act upon, the result being that the process of seasoning is of a more steady and permanent nature than it would be under the more careless rules of felling at all seasons. Though the forest-trees of New Zealand are mostly of an evergreen nature, I am convinced that the same rule could with advantage be applied to them, as there is a season even with evergreens when the sap rises but very slowly, and which experience shows is the best and proper time for felling.

Nor would a close season affect the sawmiller so much as he might lead us to suppose, as after the first close season a sufficient quantity of timber could be cut down as would enable the mills to be kept running the whole of each year afterwards. Nor is this all, for under the close system the mills could devote more time and care to several important points, such as perfecting their plant, selecting the logs, the best being reserved and cut up for joinery and cabinet purposes only, the residue being utilised for scantling and other inferior purposes. An objection might, however, be raised on account of the bushfellers, whom some might say it would deprive of work during the close period. But, in answer to this, I would point out that it would take the whole of the time then available for *felling purposes only*, and that during the close season they could continue, as in England, to lop, trim, and square up, and generally assist in getting the logs to the various tramways or roads, ready for transit to the mill. Having given my reasons for recommending a close season, and, as far as my knowledge avails me, combated the objections against it, I will proceed to the next, and, if possible, more important, question of what I will term

Planking.

This is a question that seems to be entirely neglected by our colonial sawmillers, though it is of the most vital importance. At present the log is simply placed upon the bench-truck, and run to the saw just as it happens to lay, no consideration being given to any point except the fatal one of "How much can we get out of it?" No attention is paid to the grain of the cellular tissue, or cross-section of the log, or whether it is most suitable for joinery timber or rough building scantling. Thus I have frequently seen the most beautifully-figured rimu cut into scantling, while 12in. and 10in. boards for polished work could only be obtained of the plainest description. When a log is going to be cut the cross-section should be carefully examined, the white lines or silver grain being traced until the point is found where two of them, radiating from the centre, are the nearest to a true diameter, or a straight line across the centre of the section. This should form the flat or broad way of the board or plank; and would, in nearly all cases, be the most economical method of cutting also. To make myself perfectly plain I append two diagrams.

No. 1 diagram shows the squarely-cut butt of the log, the red lines being the silver grain (technically called medullary rays). These all spring from the pith or centre of the tree, and the rays connecting the points A B being the two forming the nearest approach to a straight line at once gives us the correct way to plank it. The log should be turned over until the line A B becomes upright, and then it can be cut into planks, beams, or boards, as shown in Diagram II. This is most important in obtaining a stock of timber that will keep perfectly true and straight, and the neglect of applying this rule has a great deal to do with the frequent twisting and winding of kauri doors and joinery manufactured in our mills. Then, there are other appearances which, if noted, point to the strength and durability of the timber to be used. Timber which has grown very slow, as shown by the closeness of the annual rings, is the strongest and most durable. The tissues or ends of the longitudinal fibres should adhere firmly together, and the saw should run free without clodding. The darker the colour also the greater the hardness and durability. The careful ob-

servance of these few rules would, at the outset, of course cause some loss of time to the sawmiller, but he would in a little time be more than recouped by the additional value he would receive for his timber, and the increased demand that would arise for it. No timber will ever be accepted for long in Great Britain that will not "stand," and no miller can guarantee colonial timber unless these and other rules are strictly observed. And now I arrive at, from a joiner's point of view, the most important question of all—namely,

Seasoning.

This operation consists of a process of drying up or forcing outwards, either by natural or artificial means, of all the moisture or juices known as sap, so as to prevent decay or shrinkage from internal causes. It can be effected in several ways, the first and most effective being the natural one. This method consists of carefully stacking the cut timber where the air can have free play upon it, care being taken to shelter it from both rain and sunshine. This system being slow renders the wood tough and elastic, but at the same time takes from four to eight years to be thoroughly completed. It therefore requires considerable stocks to be kept in hand, and, consequently, can be only utilised by sawmillers of considerable means. Among artificial methods of seasoning that known as water-seasoning is the simplest. This is done by soaking the balk or squared log in water soon after cutting, care being taken to entirely cover it with water. This is a good method of killing the sap or other fermentable matter, but at the same time it has a tendency to weaken the timber so treated; therefore where strength is necessary it should be avoided. It is usually sunk in lagoons or by the banks of rivers, &c.

Steaming timber is another method, but, personally, I do not approve of it. If seasoned in this manner the timber should only remain in the steam-chest for four hours, and then be dried very slowly. Steam also impairs its strength, while as a set-off steamed timber rarely shrinks. The best artificial means of seasoning is, in my opinion, that of the hot-air oven or bakehouse. The timber is placed in a large chamber, through which a current of hot air is driven by a fan at a rate of about 100ft. a second, the air-passages being so arranged that the heated current permeates the whole of the room-space. The time required under this system is regulated by the thickness of the timber operated on. I believe a Mr. Davidson published a table of time necessary to stated sizes.

And now, in conclusion, I would say that, if used under the restrictions I have indicated, many New Zealand trees would make the best of timber for joinery and cabinet purposes, rimu and totara being especially serviceable, the former, when seasoned, taking glue so firmly that it is almost impossible to break a joint without tearing the fibres of the wood. Totara, though free from any tendency to shrink, is full of a natural oily fluid which prevents the glue adhering, but this again could be evaporated in the hot-air kiln or oven. The foregoing remarks have been written in no pedantic spirit, but simply with a view of creating a discussion among more experienced men than myself, which would in the end materially assist the various timber industries.

HARRY WARNER,

Amalgamated Society of Carpenters and Joiners.

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