

1924.
NEW ZEALAND.

SUMMER TIME BILL COMMITTEE

(REPORT OF THE), TOGETHER WITH MINUTES OF EVIDENCE.

Presented to the House of Representatives and ordered to be printed.

(MR. K. S. WILLIAMS, CHAIRMAN.)

ORDERS OF REFERENCE.

Extracts from the Journals of the House of Representatives.

THURSDAY, THE 25TH DAY OF JULY, 1924.

Ordered, "That the Summer Time Bill be referred to a Select Committee to be set up by the House."—(MR. SIDNEY.)

TUESDAY, THE 12TH DAY OF AUGUST, 1924.

Ordered, "That a Select Committee be appointed, consisting of ten members, to whom shall be referred the Summer Time Bill, with power to call for persons and papers; three to be a quorum; the Committee to report within three weeks from date: the Committee to consist of Mr. Field, Mr. Girling, Mr. Hawken, Mr. Hockly, Mr. Jordan, Mr. Ransom, Mr. Smith, Mr. Sullivan, Mr. Williams, and the mover."—(MR. SIDNEY.)

THURSDAY, THE 21ST DAY OF AUGUST, 1924.

Ordered, "That Standing Order 219 be suspended, and that Mr. Tau Henare and the Hon. Mr. A. T. Ngata be added to the Committee on the Summer Time Bill."—(MR. SIDNEY.)

R E P O R T .

THE Summer Time Bill Committee, to which was referred the above-mentioned Bill, has the honour to report that the said Bill has been carefully considered, and the Committee recommends that it be allowed to proceed with amendment as shown on the copy of the Bill attached hereto. Minutes of evidence are attached.

16th September, 1924.

F. F. HOCKLY,
Acting-Chairman.

MINUTES OF EVIDENCE.

WELLINGTON: TUESDAY, 19TH AUGUST, 1924.

Mr. W. T. NEILL, Surveyor-General, examined. (No. 1.)

The Acting-Chairman.] Your full name?—William Thomson Neill.

And your designation?—Surveyor-General.

Will you make a statement?—Yes, sir. The more important factors to be taken into consideration in determining the fundamental principles on which legal time should be determined so as to effect the saving of daylight in a country situated like New Zealand are the inclinations which the central axis makes with the line of simultaneous rising and setting of the sun throughout the year, and the choosing of the meridians which will give the best result and to which the times are referred to. The effects of dawn and twilight are unimportant and need not be taken into account. The Dominion covers a breadth of nearly 12° of longitude, from about $178^{\circ} 36'$ east at the East Cape to about $166^{\circ} 26'$ east at the West Cape in the Sounds district. The local times at the East Cape and West Cape are, therefore, 11 hours 54 minutes and 11 hours 6 minutes respectively fast on Greenwich, or a range of a little over three-quarters of an hour. Again, the country is contained between the parallels of 34° and 47° south latitude, and the difference in the times of sunrise at a place in 34° latitude and another place on the same meridian in latitude 47° at midsummer is about three-quarters of an hour. I would refer you to the map herewith [Map handed in]. This map shows the front of the advancing wave of light arriving at the East Cape at the summer solstice by the red line marked "Summer rising," and as this line is nearly parallel to the central axis, all zones parallel to the line of summer rising receive daylight about the same time. Further, the line marked "Summer setting" is shown to make a large angle with the central axis, the consequence being that the northern places lose daylight before those situated more to the south, thus West Cape loses the sun about seventy minutes later than East Cape. It is now obvious that the meridian to which summer time should be referred ought to lie to the east of the Dominion if the best result is sought in order to counteract the early setting-in of darkness in the northern latitudes. By similar reasoning, as regards the simultaneous rising and setting of the sun at the winter solstice shown by green lines on the map, the conclusion arrived at is that the meridian which will give the best result during the winter months should lie to the west of the Dominion. With regard to the New Zealand standard time at present, the New Zealand standard time, 11 hours 30 minutes fast of Greenwich was adopted in 1868 on the advice of Sir James Hector, who was asked by the Government in that year to submit proposals for a standard time suitable for use throughout the colony, the development of the railway and telegraph systems having rendered the diversity of times previously prevailing in the country most inconvenient. A recommendation in 1891 was made that New Zealand standard time should be eleven hours in advance of Greenwich in conformity with the international time agreement for exact hours different from Greenwich. A further recommendation in 1917 was made by the Wellington Philosophical Society that New Zealand standard time should be twelve hours in advance of Greenwich. The adoption of either of the above recommendations separately would not assist in the saving of daylight. Choice of meridians: It has been shown above by astronomical considerations alone that the meridians on which summer time and winter time should be based must lie respectively to the eastward and westward of the Dominion. If one hour is agreed upon as the difference of legal time between the winter and summer seasons the meridians to be adopted are evidently 11 hours in winter and 12 hours in summer in advance of Greenwich. The present standard time could be altered to agree with the legal summer time if considered desirable, and provision should be made for continuing Greenwich time for astronomical and other scientific purposes, as is done in the British Legal Time Bill. If eleven hours in winter and twelve hours in summer in advance of Greenwich were adopted, the difference between the legal times of this Dominion and Great Britain would be ten hours during the winter and twelve hours during the summer. I will now refer to the social and industrial advantages and disadvantages. The principal social and industrial advantages to be gained by the adoption of the above-described times of 11 hours in winter and 12 hours in summer in advance of Greenwich are that in winter the working-man and the farmer, who has now to rise and have breakfast for some three months in the year by artificial light, would have that period shortened by half an hour, and it is in the morning that artificial light is obligatory. Newspapers would gain the advantage for a portion of the year, of being ten hours ahead of Great Britain instead of $11\frac{1}{2}$ hours, and one hour ahead of Australia instead of one hour and a half as at present. These advantages, however, would be offset by the disadvantages of being twelve hours ahead of Great Britain and two hours ahead of Australia during the summer. Artificial lighting of cities would begin half an hour sooner in the winter months than at present, and as darkness takes place about the same time on all zones parallel to the central axis, this disadvantage applies equally to the whole Dominion. In summer the working-day would close half an hour sooner than at present, and all members of the community would have an extra half-hour of daylight to indulge in outdoor pastimes. Margin of daylight: At midsummer the mean excess of daylight over twelve hours, including twilight and dawn, for the mid-latitude of 41° is seven hours and forty minutes, and at the equinox the margin diminishes to two hours and ten minutes. It is apparent from these figures that by retaining the meridian of 11 hours in advance of Greenwich an advance of the clock of two hours during the summer could be made if considered desirable. It may be mentioned incidentally that daylight-saving measures are only suitable for adoption in countries within the temperate zones, where the difference between the lengths of the day

in summer and winter are large. It is, therefore, unlikely that any such changes will become popular in the Australian States. This applies to New Zealand to a certain extent, where it may be anticipated that daylight-saving will be more appreciated in the South Island than in the North Island.

Mr. Sidey.] Your argument is that the time set up by Sir James Hector for New Zealand is the most useful time, taking it all round?—There is one fixed time.

Is it your conclusion that it would be an advantage to have an advanced time for the summer?—Yes. I recommend two times—summer time and winter time.

Our present time is $11\frac{1}{2}$ hours in advance of Greenwich?—Yes.

Then, you think it would be better to have eleven hours in the winter and twelve in the summer?—Yes.

Do you not think it would be an advantage to have the whole hour—that is to say, $12\frac{1}{2}$ in summer and $11\frac{1}{2}$ in winter?—I think it would be a step in the right direction.

Mr. Girling.] I understand that you suggest that, instead of putting the clock on an hour for summer, it should be put half an hour on in summer and put back half an hour in winter?—That is so.

Is that your idea?—Yes.

Is there any advantage in putting the clock back half an hour in winter?—Only the advantages that I have mentioned in my statement.

But the idea of the Bill is really to gain an hour's advantage in the summer. Does not your suggestion only give half an hour?—No; it gives a full hour, between eleven and twelve, once you have the thing started.

Does it give a full hour?—Yes, a full hour between winter and summer.

Mr. J. Pow examined. (No. 2.)

The Acting-Chairman.] Your full name?—James Pow.

And you represent?—The Farmers' Union. I am the secretary of the Farmers' Union—the central organization.

Will you make a statement?—This question of the Daylight-saving Bill was discussed at our Conference. This Conference consisted of between seventy and eighty members, representing the Farmers' Unions throughout New Zealand. They criticized the Bill from a practical point of view. The vital clauses were clauses 3 and 4. The speakers at the Conference stated that the effect of this Bill would be that the dairy-farmers, of whom there were sixty thousand out of the ninety thousand farmers in the country, would have to get up one hour earlier in the day. So that farmers getting up at the present time at 4, 5, or 6 o'clock would have to get up at 3, 4, or 5 o'clock according to the present standard time. They also pointed out that, although there was no real economic break between milking and milking, there was an awkward period after the milking was done. They generally finished washing-up and having tea about 7 o'clock, so that the actual time they would finish up would be 6 o'clock. And several of the speakers pointed out that that would cause an economic loss—they could not get their teams out to do any more work, and suchlike—they would simply have to put in time, as it were, till they could go to bed. Several of the speakers also pointed out that if this Bill were carried it would mean a longer day, and thus would tend to make life more distasteful in the country, and cause a drift towards the towns again, which the Farmers' Union are trying to stop. That is their objection to subclause (1) of clause 3. Then, they object to subclause (1) of clause 4. If the Bill is carried it will come into operation on the first Sunday in October. It was pointed out that this was the time of the year when it was necessary to send milk to town without delay, and it would be necessary to send the milk into town on the day of milking.

On the Sunday?—Oh, yes. That would be necessary owing to the season. Owing to the heat the milk could not be kept from the one day to the next. Well, delegates at the Conference from different parts of the Dominion were against the introduction of this Bill, and the following resolution was passed: "That this Conference is of the opinion that a Daylight-saving Bill would be against the best interests of the farmers, their duties requiring too long a day even under the present conditions, and it would also have a tendency to still further increase the drift from the country to the towns." I may say that resolution was carried with only one dissident.

Mr. Sidey.] Is it not a fact that there was hardly any discussion at all on this matter?—As far as I can remember, about seven or eight speakers took part in it from various parts of the Dominion.

I did not quite grasp the point you brought up about the farmers finishing off work at 7 o'clock at present and as to what they would do in the evenings if this Bill was passed?—I am only quoting the arguments which were produced during the debate. I pointed out that if they finished at 7 o'clock under the new Bill the actual time would be 6 o'clock. There would be a considerable amount of daylight left, which would be practically waste time. They could not do any work, and it would not be late enough for them to go to bed.

What time do they go to bed?—Oh, I could not say.

What you are putting before this Committee is not your own argument?—No. It is not my own argument at all. I have just stated the arguments educed during the debate at the Conference.

I think you said that they would not be able to send their milk away on the Sunday?—I said that they would not be able to keep their milk from one day to the next.

What do they do at the present time?—Some of them send it away on the Monday morning.

What difference would it make so far as Sunday is concerned?—I only mentioned Sunday as an example. I wished to point out that owing to the exceptional heat during those six months the day's milk would have to be sent in on the day it was milked.

Could they not send it in on the same day under this Summer Time Bill?—What they adduced in their arguments was that, on account of the heat, they would not be able to keep their milk from the one day to the next.

The Acting-Chairman.] Perhaps I can explain the position in regard to Sunday. They cannot send their milk away on the Sunday because it is sent by train to the cities. If you commence to milk at 3 o'clock in the afternoon, when the sun is extremely warm, it stands to reason that that milk is hot, and it does not keep in the same way as milk drawn from the cow an hour later, or one and a half hours later, when the atmosphere is cooler, and the consequence is that the milk will not keep until the next morning, which it would do if the milking was done in the cool of the evening.

Mr. Sidey. But does not the milk go to the factories?

The Acting-Chairman. I am speaking of milk supplied to the cities—all down the Manawatu line, for instance. Hundreds of farmers send their milk to the Wellington City Council.

Mr. Sidey.] But do not the great bulk of the dairy-farmers send their milk to the factories?—Well, I should say so.

Well, then, so far as the farmers who are sending their milk to the factories are concerned it would not affect them in that way?—No.

There are only a limited number of dairy-farmers who supply the cities?—A large number.

The Acting-Chairman. A good many to supply the four cities.

Mr. Sidey.] Do you not think that this city milk is quite a minor point so far as the country is concerned?—That matter was brought up during the Conference. I am only reiterating the arguments of the delegates against the Bill.

Is it not a fact that the milk will only be one hour longer before it gets to the consumer? Do you not admit that?—That is possible.

How can farmers generally know how this Bill will affect them until they have had a trial of it?—I can only say that the delegates at the Conference were unanimously against it. They were against having to get up the extra hour earlier, and against having to put in the extra time after tea.

Do you not think that there is a good deal of misapprehension amongst the farmers in regard to this Bill?—I could not say.

They imagine that this Bill is going against them though they really do not understand how it will affect them?—I could not say personally. When the thing came into operation in France there was no difference noticed at all.

You recognize that there are any amount of farmers in the Old Country?—Yes.

As well as in France and Belgium—were you in France when the practice was brought into operation?—Yes.

And you speak, then, from your personal knowledge as to the effect it had on those concerned?—Yes; there was no noticeable effect at all. In fact, nobody knew that anything had happened.

And things went on just as they did before?—Yes.

Do you think that there is really any serious objection on the part of the farmers to this proposal?—I think so.

Even for a trial?—Yes, I should say even for a trial.

Do you think that if there was any very great objection on the part of farmers members of Parliament representing the various farming districts would have received great numbers of letters and telegrams protesting against the Bill?—Yes, one would imagine so.

Some time ago the Government proposed to advance the time by half an hour, and a Bill was introduced for that purpose: was any protest made by the Farmers' Union?—I cannot say.

Did you belong to the Farmers' Union at that time?—No.

Mr. Girling.] You say that if the proposal contained in the Bill was agreed to that it would affect sixty thousand farmers out of a total number of ninety thousand?—Yes, roughly speaking. I may say that the total for the voting in connection with the Dairy Control Bill last year totalled about fifty-seven thousand.

Do you estimate that there are two-thirds of the total number of ninety thousand are what may be termed actual dairy-farmers?—I would not like to say. I may say that I tried to find out exactly from the Dairy Division of the Agriculture Department as to who were *bona fide* farmers, but they could not tell me exactly.

Now, with respect to the town suppliers, will you tell the Committee by what train do they send their milk to town—that is, do they send their milk by the morning train or by the evening train?—They send their milk to town by both trains.

Would it not be possible to milk the cows a little earlier in the evening?—Everything would be automatically pushed an hour ahead.

You also stated that the farmers would not know what to do with their time between 6 o'clock and bedtime?—One of the matters pointed out was that there was an awkward period between tea and bedtime.

You say that March is one of the worst times to have this practice in operation?—That is the time mentioned in the Bill. As a matter of fact, that is one of the worst times for keeping milk.

The Acting-Chairman.] How many delegates were there at the Conference you refer to?—Speaking offhand, I should say about sixty-three.

And you say that they were thoroughly representative of the farming interests?—Yes, right from Auckland to Invercargill.

While you mention this alteration would affect sixty-thousand dairy-farmers, it would affect their families and employees as well, would it not?—Quite so.

As the average family is about five, by multiplying sixty thousand by five that would give us about a quarter of a million that would be affected by this suggested alteration?—Yes.

Now, in regard to the question of the awkward hour, do you not think that the inevitable result would be that instead of having the awkward hour on their hands the farmers would work that extra hour, and milk their cows later?—That point was brought up by two or three speakers at the Conference. It was submitted that after they sent their milk away to the factories, washed up, and had tea there would be a lot of time left in which they would do nothing.

There would be a large proportion of farmers who do not send their milk away in the evening, and therefore they would not be governed in any shape or form by the trains, and that instead of having the awkward hour referred to they would work the extra hour, with the result that they would get an hour's less rest. You stated that many of the farmers commence work at 3 a.m. and finished at 7 o'clock in the evening—that is, approximately fifteen hours per day; that being the case, they are only left with nine hours to obtain recreation and rest?—Yes.

In reply to a question you stated that there were seven or eight speakers who took part in the discussion of this matter at the Conference: what period of time did this remit come up?—It came up, I think, on the Thursday morning at about 11 o'clock.

Is it not the tendency at all these conferences to take a lot of time over the first two or three subjects, and that after that the discussion becomes very considerably curtailed?—That sometimes happens on the last day. The Conference generally lasts four days, and most of the speakers have said all they want to say by the Thursday.

Mr. Sidey spoke about a trial, can you suggest any reason why a trial is necessary—do you consider that the knowledge is so complete upon the matter that there is no necessity for a trial?—I said in reply to Mr. Sidey that there was no misunderstanding about the thing, and the farmers are quite decided that it is in opposition to their wishes.

Mr. Sidey made a point of the fact that if the farmers were deeply interested in this matter and did not want it there would be quite a large number of protests received from them: would you suggest that this is a proper view of the matter, that owing to the fact that this measure having been before the House since 1908, and each time it having been defeated—

Mr. Sidey: No.

The Acting-Chairman: Well, it never reached the statute-book.

Mr. Sidey: It was never defeated; it has been either blocked by stonewall or—

Mr. Girling: Well, I will put it this way: it never reached the statute-book.

(To witness): In view of the fact that there are a large number of farmers in the House it is reasonable to conclude, is it not, that the farmers are leaving it entirely to their representatives, feeling quite confident that the position is quite safe?—That is so. I think it cuts both ways.

Mr. Sidey.] May I ask what proportion of the farmers get up at 3 o'clock in the morning?—I could not say. I do not think anybody gets up at 3 o'clock in the morning at the present time. However, the position is that those farmers who get up at 4 o'clock would really get up at 3 o'clock according to standard time.

You admit, do you not, that the farmers work by the sun, and as they work with the sun they will continue to work with the sun and will get up with the sun—you will admit that the farmers work by the sun?—I did not mention anything about the sun.

You made a point that there would be extra daylight which they could not use?—Yes.

That would be at the commencement of October; but when you get to the months of November and December, then there would be daylight up to 8 o'clock, would there not?—Yes.

What do they do during that time now?—I cannot say.

Mr. Girling.] Mr. Sidey made a point that the members had not been inundated with requests from farmers to vote against this Bill: do you not think it is rather the other way about, since they have left it in the hands of the Farmers' Unions to forward along their opinions—if they were in favour of it would they not have asked us to support the Bill?—As I said before, I think it cuts both ways.

When the farmers finish up at 7 o'clock in the evening would they not have their tea between 7 and 8 o'clock?—After washing up the milk-cans they finish in the ordinary day about 7 o'clock.

Would not that hour be utilized freely by some farmers in the following-up of some sport, such as tennis or cricket?—Not many of the farmers have any time for sport.

Do they not go in for tennis and such sport?—I should not think so.

Would you be surprised when I tell you that in the Spring Creek district you will see about forty or fifty farmers on the tennis-courts at 6 o'clock—of course, they are not dairy-farmers; they like their sport as well as anybody else?—Yes, if they can get it, but when they get up at 3 o'clock in the morning they do not feel very much like it.

MR. ROBERT WILLIAM SHALLCRASS examined. (No. 3.)

The Chairman.] You are representing the New Zealand Sports Protection League, are you not?—Yes.

You wish to make a statement to the Committee in regard to this Bill now before us?—Yes. I might mention that the New Zealand Sports Protection League represents every branch of legitimate sport as well as that large section of the community who are patrons and supporters. All organizations formed for the promotion of our national games and pastimes are affiliated to the league. Some considerable time ago the league was requested by a number of its members to give its support to any measure which had, as its object, daylight-saving. The league naturally did not come to its decision to support the movement until it had thoroughly investigated the position. The Prime Minister, who was known to be an opponent, was asked to state his objections, and the supporters of the movement were asked to state its advantages. We came to the conclusion that there would be very material advantages to the community as a whole by the adoption of what, in the United Kingdom, is known

as "summer time," and that the objections were more or less illusory, or made by those prejudiced against the movement, or by those refusing to understand it. The support of the league was given to the movement principally on economic grounds. It will be seen from the diagram—this diagram was made out for the Committee that considered the question in 1909, and Mr. Sidey will, no doubt, supply you with a copy of it—that there are, between 1st October and 1st April, 284 hours 35 minutes of daylight from sunrise until 9 a.m., and that this is 138 hours 15 minutes more than from 5 p.m. to sunset, indicating that the hours of sunlight are greater before what is commonly the working-hour than they are after what is commonly the time for leaving off work. Now, if these morning hours are used instead of those in the evening, it is clear that we must be making use of the daylight to a greater extent, and every extra hour of daylight used is an extra hour of artificial light saved. It is difficult to estimate what this saving throughout the Dominion would be. Every household should save one hour's light per day, and all shops and business places which keep open in the evening and all shops on the late nights would make a similar saving. It ought to be a safe basis to estimate the saving on an average for each household of 10s. during the five months. The saving to shopkeepers would be very substantial.

Is that 10s. per week?—No; 10s. for each household for the whole period. The measure was adopted at Home and in Germany mainly on economic grounds during the war, and the best guide as to the saving effected is the experience of the United Kingdom. There we have an actual experience, and there is no estimate so far as the United Kingdom is concerned, and they have been able to tell from actual experience as a consequence of the adoption of the measure what the saving was, and the saving in coal alone in the United Kingdom for the first year was no less than 2,500,000 tons, which was an immense and valuable economic saving to the community. I may say also that the extra hour would be a great advantage to young people and working-people who are endeavouring to make a home for themselves. Of course, the experience in Wellington is the same as that in most places. For instance, a young man goes out to Karori and has to cut out a site for himself in order to erect a home for his wife and family. In Christchurch you will find that the young fellows are making their homes a little way out in one of the suburbs, and the experience in Auckland and other places is similar. The extra hour affords him the opportunity to improve the property which he hopes to make for his home. There is also gardening to be done and odd jobs about the house, and this extra hour affords the best opportunity of doing this very useful work. We think that any movement which will assist young people in the community to make and improve homes for themselves is a good one and a policy that the Government should pursue. It will be probably declared that the community will continue to remain out of bed to as late an hour as at present, and this would have an injurious effect upon children. That is a common objection. Here, again, we will again refer to the Old Country and find out what is the experience there. At Home, among other things, it was alleged that children's hours would be curtailed, and that vitality of body was reduced in the early hours; but the reports of police authorities showed that the tendency throughout the country to spend the extra hour out-of-doors made for improvement in the moral tone, as well as a marked decrease in juvenile offences was noted, and the health committees saw no reason to suppose workers were adversely affected. I may say that the league, in order to ascertain what was the feeling throughout New Zealand either for or against the Bill, communicated with the various organizations throughout the country, and the following local bodies and industrial organizations have, within the past three months, expressed their approval of the measure: Christchurch City Council; Wanganui City Council; Wanganui Harbour Board; Dannevirke Borough Council; Petone Borough Council; New Plymouth Borough Council; Pahiatua Borough Council; Northcote Borough Council; Birkenhead Borough Council; Palmerston North Borough Council; Hawera Borough Council; Whakatane Borough Council; Thames Borough Council; Ashburton Borough Council; Blenheim Borough Council; Inglewood Borough Council; Stratford Borough Council; Taumarunui Borough Council; Newmarket Borough Council; Takapuna Borough Council; Te Aroha Borough Council; Otahuhu Borough Council; Wanganui Education Board; The Federated Chambers of Commerce; Wellington Chamber of Commerce; Wanganui Chamber of Commerce; Rotorua Chamber of Commerce; Taranaki Chamber of Commerce; Gisborne Chamber of Commerce; Hastings Chamber of Commerce; New Zealand Federated Drapers; Wellington Grocers' Industrial Union of Employers; New Zealand Furniture Trades Industrial Association; Bank Officers' Guild.

Are there any County Councils included in that list?—No.

Were they asked?—No. At about the time representatives of the County Councils in Taranaki were coming to Wellington in connection with a scheme of railway extension. They were approached on the subject, but the other County Councils were not communicated with on the subject. The other strong reasons in favour of the Bill are that it would provide better facilities for recreation, and in turn would be beneficial to the health of the community, making for efficiency—again an economic advantage. The medical profession, educational authorities, and sports bodies meet here on a common ground in their advocacy of the measure. The medical profession and the educational authorities will probably speak for themselves. I think I can, on behalf of the sports bodies, assume that the Committee will freely admit that the adoption of summer time will give very much greater facilities for the promotion of our summer games. I am sure, too, that I will not have to persuade the Committee to acknowledge that participation in our sports and pastimes is a great beneficial factor in forming the British character. It is acknowledged by all authorities that the qualities by which the Britisher is able to hold his own amongst the nations of the world have been cultivated to a great extent on our playing-fields. It is good policy, therefore, on the part of the State to assist the sports' bodies in the great national work which they voluntarily undertake without profit or gain. It seems unnecessary to unduly stress this point, as we have the advantage of the results of the actual experience of the United Kingdom. This should be convincing evidence. In September, 1916,

the Home Secretary appointed a Committee to inquire into the social and economic results of the Act. It reported to the effect that the small temporary inconvenience of the transition from normal to standard time and back were altogether outweighed by the saving of artificial light and the general gain in health from the addition of an hour of daylight to the time for exercise and recreation. The following summer sports bodies have passed resolutions in favour of the Bill, and strongly support it. The membership numbers are taken from the Government Statistician's figures. New Zealand Lawn-tennis Association, membership 19,967; Dominion Bowling Association, 13,943; New Zealand Golf Association, 9,115; New Zealand Cricket Association, 8,566; New Zealand Swimming Association, 6,443; New Zealand Rowing Association, 2,400; amateur athletics (estimated), 6,000; professional, 4,775. The total is 73,109. The league also represents the following sports bodies who are not directly interested, but are in sympathy with the movement: New Zealand Rugby Union, 40,000; racing, 16,967; trotting, 6,349; hockey, 6,479; association football, 6,000; league football, 3,818; gun clubs, 1,614. The total is 81,227, making a grand total of 154,336. Now, Mr. Chairman, if I may be allowed to do so, I will now make some comments with respect to the objections that have been made against the Bill. The common objection is that there is nothing at the present time to prevent any industry putting the clock forward half an hour or an hour. Efforts have been made by a number of firms in this direction, and the Civil Service have since the war advanced their hours of work all the year round by half an hour. Great difficulties are, however, met with, and it must be clear that for the measure to be effective it must be universal. Railway, tramway, ferry, and shipping services are all arranged to meet existing conditions; hours for meals and for bed are also similarly arranged. Awards of Arbitration Court fixing hours for closing and opening would require alteration, and certain Acts of Parliament fixing opening and closing hours may require alteration. The opportunities of doing business with other firms are restricted. When the employees get away in the afternoon they may wish to spend the extra hour of daylight at cricket, but their club-mates in other businesses cannot join them. So you could go on illustrating the difficulties in the way of a partial adoption of this proposal by separate sections of the community. The Committee of the House in 1909, which did not consist wholly of those favourable to the proposal, were unanimously of opinion that the object could best be attained by legislation. Another objection is that there will be very serious inconvenience to nearly all the people engaged in the primary industries, and in some cases very serious loss. Now, I think that those men who make such an objection should be asked to show, by some detail, in what way the inconvenience and serious loss would result. The league has examined the question carefully and cannot find any real grounds for such an objection. Farm workers, whether engaged in dairy work, agriculture, pastoral, or orchards, are not bound to any hours of labour. There is no award which binds them to the time of starting or finishing. At present it is customary to work by the sun, rather than the clock, and the adoption of "summer time" will not compel them to alter their habits one bit. The Prime Minister himself said that the farmers at Home took no notice of the daylight-saving measure. In the case of shearers a time has been fixed—a twelve-hour day when an early start is made; but they are paid by the tally, and not by time, and I am told in a great many sheds the clocks are generally from half an hour to an hour ahead of standard time. Thrashing-mills have fixed time, but here again it covers a day of twelve hours, and is therefore made adaptable for weather conditions rather than for the object of making a fixed time for starting or stopping work. Outside of these two cases everybody on the farm can go to work when it is most convenient, and knock off according to the work in hand, no matter what the clock says, and the passing of this Bill will make no difference to them. There is only one exception, and that is where the farmer is working in conjunction with an early morning time-table. Now, let us examine this question and see how much inconvenience will be occasioned. I was going to take Mr. Williams's electorate, but instead of that I will take the Acting-Chairman's electorate. That is the Rotorua Electorate. Fortunately, or perhaps unfortunately, his electors are not greatly troubled by railways. The line from Rotorua to Tirau is the only one in which he is concerned. There is a train once a week on Thursdays, which leaves Putaruru at 6.30 a.m., and another which leaves Rotorua daily at 6 a.m., but it is 7.10 before it reaches Mamaku, and 8.20 a.m. before leaving Putaruru, and 9.50 before it reaches Matamata. It will thus be seen that the time of departure from stations other than Rotorua are not at an early hour, and should not occasion any inconvenience in the summer. Beyond this, the major portion of the Rotorua Electorate is not affected in any way by the passing of such a Bill as this. The Rotorua Chamber of Commerce and the Whakatane Borough Council have declared themselves in favour of the Bill. Those bodies are in close association with the farming community, although they may not be farmers themselves. They know the farmers' condition, and they are in favour of the Bill. We also have an illustration close to Wellington here. Take the Otaki Electorate: The only early trains in the Otaki Electorate are those which leave Paekakariki for Palmerston at 6.35 a.m., and for Wellington at 5.50, and the train from Upper Hutt at 6.27. These trains, however, run both in winter and summer. During the winter they start about an hour before sunrise on an average; in summer under this Bill the time would be well after daylight. It is in the winter where the hardship is felt. In any case the number of people that are affected by the early train service is very small indeed; and why should the hundred thousand people of Wellington be deprived of the benefits of the Bill just because there may be some slight or imaginary inconvenience to a handful of people who are compelled to use the early suburban railway services? Similar investigations regarding the railways could be made in other parts of the Dominion with the same result. Early morning services are few and far between, and at the same time in large dairying districts the tendency now is not to use the train at all, but to send motor-cars from the factories, and they collect the milk and the cream around the district, and take it at any hour that is convenient to the factory. This Bill will not force them to take their milk or cream to the factory at any hour that is not convenient to them. It will not, and you cannot tell me how it will.

We have had rather a curious experience in Taranaki, which is the home of the dairy-farmer in New Zealand. The New Plymouth Borough Council, the Taranaki Chamber of Commerce, the Inglewood Borough Council, the Stratford Borough Council, and the Hawera Borough Council have all declared in favour of the Bill. I do not think I have very much more to say, except, in conclusion, to point out that New Zealand is most favourably placed for the adoption of "summer time." We are very favourably placed when compared with Australia and other places which are situated in the tropics. We cover a very few degrees of longitude, and the actual time in any part of the Dominion is not greatly different from standard time. The degrees of latitude in which New Zealand is situated are such as to provide very little twilight in the whole of the North Island and larger part of the South. We are completely detached from other countries. I expect in the course of the meeting of this Committee you will hear a great deal of evidence in favour of the measure and perhaps a little in opposition to it. The view of the league is that the easiest and best way to settle the question is to give it a trial for, say, five months. That is all the Bill provides for, and it has the hearty support of the organizations which I represent.

Mr. Girling. You are aware, of course, that many industries at the present time work an estimated number of hours within the ordinary schedule time—they put their clocks on. For instance, the sawmills, flax-mills, and so on: you are aware of that?—That does not happen in centres of population. It is done in places where it does not interfere with the services of the rest of the community. I have noticed that in some of the sawmill awards provision is made for an earlier hour of starting.

Could not this be done by mutual arrangement with respect to business premises whereby they could start an hour earlier?—I think I have dealt with that matter very fully. It is done to a certain extent at present—namely, in the soft-goods warehouses, the Civil Service, and one or two other establishments; but it can only be done to a limited extent. It is not a thing that could be put effectively into force in a partial way. As you are aware, I quoted the opinion of the last Committee of the House, and it stated they were unanimous that the best way to effect it was by legislation.

Do you not think that provision should be made whereby the farmers should not be interfered with so far as their work is concerned?—I do not think this Bill will interfere with the farmers so far as their work is concerned.

They maintain it will?—There is nothing to compel them from doing anything different to what they are doing at the present time. They are in the privileged position of being able to work as long as they like and leave off work when they like.

We will take it that the farmers will be interfered with if this Bill were passed into law?—I am not admitting that.

We will admit it for the moment: would it not be possible for the townspeople to arrange for work to commence earlier and thus close up their premises earlier?—I am of opinion that the only effective way of producing this result is by legislation.

Do you not think there is the possibility, if legislation were introduced, of some business establishments altering their hours of business, and thus defeat the aim that is desired—that is, those business establishments having a particular award confining them to certain hours?—The majority of business establishments at the present time are working under awards. Those establishments that are under no awards may be induced to adopt the practice you suggest.

Take, for instance, the retail premises in Wellington, they are able to keep open till 6 o'clock, are they not?—The closing-time for a good many of them is 5.30 p.m.

They do close at 5.30 p.m., but in a great many cases they keep open until 6 o'clock: do you not think it would be possible, if this Bill were passed, that they would start their employees half an hour earlier in the morning, and thus deprive them of the half-hour that was intended for their benefit?—I do not think so.

At the present time the shops open at 8.30 a.m. and from then until 9 o'clock they are empty, are they not?—There is any amount of work to be performed.

Could not that work be done between 5.30 p.m. and 6 o'clock? Do you not think by the shops remaining open that that would mean an increase in the number of customers?—Between 5.30 p.m. and 6 o'clock they are waiting to close up, and there is no work done at all.

Do you not think that some of the employers would try to defeat the objects of the Bill?—I do not think that they would try to do it.

But there is the possibility?—I think the Federated Drapers are keen supporters of the Bill by reason of the fact that they would like to assist their employees, and, moreover, they would like to make the best use of the daylight.

If it is impossible by mutual arrangement to get the business premises to close an hour earlier, do you not think the farmers should have the hours they have now?—I contend that the Bill does not interfere with the hours of the farmers except those who are working in conjunction with railway-trains.

If that is so, why should the Farmers' Union, as well as the local branches, pass resolutions against the introduction of the Bill?—For the simple reason they do not understand it.

You went into this question pretty fully in connection with the farmers' side of the case, and I presume you referred particularly to the dairy-farmer?—I do not think the dairy-farmer is any more affected than the agriculturist, the orchardist, or the man who has to harvest his crop. I may say that objection has been made by the harvester because he said that he could not harvest his crop on account of the dew on the ground.

Is he not under an award?—There is no award for the harvester. The only farm labourers who are bound by time are the shearers, who have a twelve-hour day, and the thrashing-machine workers.

Are you sure that there is no Harvesters' Union, and that the hours are not fixed for their work?—I am sure of it. I took the trouble to obtain information, because it was our business to consider the question from all points of view before getting the support of all concerned as to the Bill.

You read out the names of various local bodies who passed resolutions in favour of the Bill, and I noticed right through that they were all organized bodies connected with towns and not organized bodies in country districts. You did not ask the County Councils to pass resolutions in connection with the matter—there must have been some reason for not doing that—however, I take it that the County Councils are quite as important as Borough Councils and City Councils, are they not?—Certainly, sir.

Surely you will admit that the County Councils represent the country people?—That is so, but the Borough Council is where you have the best chance of securing consideration with respect to a question of this description.

Most of the Borough Councils mentioned in the list represent the distributors and not the producers?—That is so. I admit that the country people are against the Bill, and they are against the Bill because they do not understand it. I also admit that the County Councils in the majority of cases would not vote in favour of it, not because the Bill is no good to them, but because they do not understand it.

And they are prejudiced against the Bill?—Yes.

The Chairman.] You commenced your evidence by stating that the objections to the Bill were more or less illusory, or made by those prejudiced against the movement, or by those refusing to understand it?—That is so.

And you have told Mr. Girling that you think the Borough Councils were in the best position to formulate an opinion and understand the measure: do you think there is any difference in the intelligence between the members of the Borough Councils and the members of the County Councils?—Oh, no.

You think, then, that the members of the County Councils can understand the provisions of the measure just as fully as the people in the town?—I think the city members are more alive to the merits and demerits of a Bill of this sort than the country members.

From their own standpoint?—From the standpoint of the general good.

You think, then, that they know the business of the farmers better than they do themselves?—No, I do not suggest that.

Do you think that the man on the land is not sufficiently intelligent to come to a proper and reasonable conclusion just as the man in the town?—I do not say that.

You say that, so far as leaving off work is concerned, the farmer can leave off when he likes. That is just the point. That is why they object to the Bill. They have got to commence according to the hour fixed by the legislation?—Which legislation?

This legislation. You must surely understand that if the train is running at a certain hour it is not the men only who put the milk and the cream on to the train that are affected, but the dairy factories are also affected. They have to have their produce ready to get it to the train an hour earlier, and consequently these dairy factories will have to start their work an hour earlier. The objection is that this is going to add an hour to the day's work of the dairyman, and give him an hour's less time for recreation?—The connecting-link between the dairy factory and the train is according to the time-table. The time-table may be one hour earlier at, say, Te Aroha than it is at Morrinsville. The effect of this would be that the Morrinsville people would be on the same footing as Te Aroha was if the Bill was not passed. The dairy factories, as a rule, I do not think are hurried in order to get their produce away by the train. There is time to come and go on. And what is the time-table of one dairy factory to-day would be the time-table of another to-morrow according to this Bill.

With regard to the man you have mentioned who is improving his home and doing odd jobs about the house, could he not do that in the morning before going to work?—It is of far greater advantage to himself and to his employers to do his employer's work first and his own work afterwards.

Now, with regard to the question of the local bodies, of which you have given us a list of those who were in favour of "summer time," did you have replies from them stating that they had passed resolutions in favour of it?—From a good many of them. A number of them replied that they had received our communication, but did not pass a resolution in favour of it. None of them passed a resolution in opposition to it.

When you say that your league has considered the question you are speaking of the executive, I suppose?—Yes.

Are they all business men?—Town and country men.

Any farmers among them?—Yes. Mr. Riddiford put it into operation on his own station.

But when you came to consider this question it was considered by a body which was purely and simply townsmen?—Oh, no, certainly not. Sir George Clifford is president; Mr. Skerrett is chairman. Then there is Mr. Riddiford, who is a farmer, and Mr. Nicoll, who has farming interests.

Well, now, coming to shearing, I suppose you are aware that in mustering in the morning you cannot move the sheep while the dew is on the ground?—That is so.

That would affect the shearing to that extent?—To what extent?

As far as the mustering is concerned?—There are no hours for musterers.

But the musterers could not commence to muster the sheep for an hour later?—Why?

Because of the dew?—That is not affected by this Bill.

Pardon me, it does?—No. This Bill does not affect them at all.

Then with respect to the factory hours : is there not an award with respect to factory hours ? —I do not think there is any award, but I am not positive. But they are not affected.

The factories receiving milk are affected by the hours ?—How ?

Well, they have to comply with the trains ?—But they are not affected by the trains.

You say the Bill does not affect the farmers, but you will agree that the stock-sales will have to comply with the trains in order that buyers may be able to attend ?—Yes.

Thus they are affected in their sales on sale-day ?—To their advantage.

Mr. Girling.] Do you consider that this Bill will be of economic advantage ?—Yes.

Mr. DANIEL JAMES HAWKE examined. (No. 4.)

The Chairman.] You are a farmer residing at Sheffield ?—Yes. I may say that twenty years ago we were milking cows, and discontinued milking for a time and went in for wheat-growing ; but during the last five years we have returned to milking cows again. This season we are milking fifty cows. As you are all aware, a farmer is a hardworking man and puts in long hours. Our cream is separated in the dairy by our own separator. It is gathered by the factory conveyance about lunch-hour and put on to the train at 4 o'clock, and is taken to the central dairy factory at Christchurch. We claim, sir, that this Bill which is at present before the Committee will not affect us in the least as dairy-farmers. My son, who served two years at the front, came back to New Zealand a convert to daylight-saving after what he has seen in France as well as in my own native County of Cornwall. I have spoken to several farmers about this question in our district, and they are in favour of this Bill, and they cannot see that it is going to have any detrimental effect on the dairy-farmers. They claim that in this case, and in most other cases, we should meet the townspeople, and not have the old story of town *versus* country and country *versus* the town. We submit that if there was a little more give and take on the part of the town people and the country people we should get on much better than by fighting one against the other. I may say that only last evening, just before going aboard the ferry-steamer, I met Mr. J. Read, of R. and J. Read, Darfield, who, as we all know, stands high in the farming community, and when I mentioned to him where I was going he said, "Good on you ; I am with Mr. Sidey in his measure." They do a little dairying, but their operations are confined mostly to sheep-farming and grain-growing. Mr. Read, like myself, is a member of the Malvern County Council, and I feel almost sure that if the question were submitted before the County Council it would be agreed to by a majority of the members. The question has never been put before us, and I think it is a mistake, so far as the South Island is concerned, that the question has not been submitted before us. The question of the dew affecting shearing operations has been mentioned, and I may say that, so far as my own estate is concerned, there are some four thousand sheep shorn and the dew does not affect the shearing in any shape or form. I submit, therefore, that the question of dew should never have come into the question. I have been a shearer since 1887, and the dew does not affect the shearing operations at all.

Of course, there are different circumstances in different climates ?—No doubt. I take it, then, that the climate in the North is different to that in the South. As I say, the dew does not affect us. My purpose in attending this Committee is to impress upon you the necessity of giving this measure a trial. As a dairy-farmer as well as a sheep-farmer I ask you to give it a trial, and do not turn it down without giving it a fair trial. Our faithful friend, Mr. Sidey, has stood by this Bill for a number of years, and I think he is a brick.

We all think that ? I could not help congratulating him when I heard that the measure went through its second reading in the House. I say again give it a trial before turning it down. My son, who was at the front, has gone in for tree-planting, and he spends all his leisure time in watching and attending to the growing of trees. I may say that I believe in giving my boys amusement, not harmful amusement, but good healthy amusement, and, as I say, it will not affect us to have the hour off. The old adage which was taught me as a boy that early to bed and early to rise makes a many healthy, wealthy, and wise is undoubtedly true.

Mr. Sidey.] You have heard it stated here that if this scheme comes into operation it will have the effect of making a long day for the dairy-farmer : do you think that that will be the case ?—Not at all. I submit that the extra hour will be spent in the following up of some hobby.

What time do you commence work in the morning ?—About 5 o'clock.

Is that about the usual hour for the dairy-farmers in your district to commence work ?—Yes.

And what time do you knock off in the evening ?—We knock off at 4 o'clock, and then have a drink of tea, and then go to do the milking, which takes us about an hour and a quarter.

And what is the time you knock off at night ?—From 6 o'clock to 6.30.

What do you do after that ?—As I say, follow up some hobby. One of my boys goes through his trees and attends to them.

What time do you usually go to bed ?—9 o'clock is our regular time.

And you would still go to bed at 9 o'clock at night if this Bill came into operation ?—Yes, just the same.

You are speaking for the dairy-farmer who supplies cream to the factory, and not for the dairy-farmer who supplies milk to the towns ?—I cannot speak for him, because I have no knowledge of his position.

Mr. Girling.] You mentioned that your cream was taken away at about lunch-hour and put on the train at Sheffield at about 4 o'clock ?—The lad who gathers the cream has six miles to take it out, and it is put on the train at 4 o'clock.

That is once a day, is it not ?—No ; every other day.

It does not, therefore, make any difference to you whether you milk early or late, because you get your cream away at the same time?—Yes.

You heard what Mr. Hockly said with respect to milking an hour earlier in the summer-time: do you consider it would affect the milk?—Not when you have a good supply of fresh water. We are fortunately situated in the matter of the water-supply. We flood the yards with spring water, and it keeps the cream in an excellent condition. We have never had a complaint yet as to our cream.

Every farmer is not so fortunate as you are in that respect—I mean, throughout New Zealand?—I cannot speak for the North, because this is my first visit to the North Island.

How long have you been in Canterbury?—I landed here in the year 1885.

Mr. Girdling.] What would your boys do with the extra hour before it is dark?—That extra hour would be used to their own interest.

Would they have to get up an hour earlier in the morning?—Yes.

How much time off do they get now?—I claim from eight to eight hours and a half. Instead of going out in the heat of the day we take a rest. We cannot do that when shearing is on, but at other times I say to my sons and employees, "Take a rest during the heat of the day."

Under the Daylight-saving Bill would they not get an hour's less sleep?—I cannot see that.

But they have to get up an hour earlier in the morning?—Well, they may, from that point of view.

The Acting-Chairman.] I wish to compliment you on the way you have given your evidence. Have you had any means of ascertaining how it will affect other neighbouring farmers?—No.

Mr. Sidey.] I wish to explain that Mr. Hawke is a perfect stranger to me. He wrote to me congratulating me on getting the second reading of the Bill through, and said that he would like to give evidence.

The Acting-Chairman.] Tell us what amount of land you have got?—2,600 acres.

And what do you carry?—We are carrying two thousand sheep and fifty cows, two teams, and fifty head of young cattle.

Is your dairying more or less of a side line?—We have had to take up dairying during the last five years simply through the tremendous drop in prices received for steers and other stock.

Is it undulating country?—There is about 75 acres of peat, and the rest is undulating downs.

Do you cultivate roots for the cows?—Yes; mangolds and swedes.

When do you send your cream to the factory?—Every second day.

Are there any cheese-factories in your district?—No.

Well, if there was, and they had to take your milk every morning, and the factory had to work according to the time set out in this Bill, how would it affect you?—It would not affect us, because the train leaves about 8. It would give us ample time.

But if you were milking 100 cows?—It would give us ample time.

When would you start?—About 4.

By the ordinary clock?—No; by the new time.

Would four hours be enough?—Yes; ample time.

WELLINGTON: FRIDAY, 22ND AUGUST, 1924.

MR. JOHN READ examined. (No. 5.)

The Chairman.] What are you?—I am president of the Wellington Trades and Labour Council. I am also president of the Trades and Labour Council Federation of New Zealand, as well as secretary of various labour organizations.

You wish to make a statement to the Committee in regard to the Bill now before it?—Yes, sir. With respect to the matter under discussion—that is, the Summer Time Bill—I may say that I have looked through the Bill, and I presume that the essential feature of it is that it is proposed to advance the clock one hour during the summer-time. We had a discussion in the Trades Council last evening with respect to the matter, and during the course of the discussion some of our members were rather inclined to oppose the idea at first, but it was quite apparent to those who had given any thought at all to the matter that it was due to the fact that they had not given sufficient consideration to the question involved. I might instance as one so-called argument that was adduced was that a labourer who was working out at Seatoun, if the clock was put on an hour, would be inconvenienced because the trams would not be running when he wanted to get to work. Obviously, that argument was ridiculous, because the time would be put on in the case of the Tramway Department just as it would be put on in the case of the workmen, and therefore there was nothing in the argument from that point of view. During the course of the long discussion on the Bill there were three of our delegates present who had lived in Great Britain during the time the Summer Time Bill was in operation there, and it was very significant that the three delegates who had had experience of the conditions under that Bill were the most enthusiastic in support of its adoption here, and undoubtedly they influenced very largely the members of the Council at the meeting, and when we finally took the vote there was only one delegate who voted against it. We could almost say that after a full discussion in the Council we were able to come to practically a unanimous decision on the question. I would like to say that I have worked in the timber industry from about the year 1903 to 1908, and during that time I was engaged as an engine-driver in the sawmills in the Dannevirke district, and during that period the men engaged in the industry made the time suit them, instead of them having to suit the time. That, sir, is one of the underlying principles of the Bill. In other words, if human beings can see that

they can get more out of life by using the daylight to a greater extent, then they are justified in adjusting the clock in order to suit their own circumstances. As I say, in the sawmill business the men looked at it in that light, and the usual practice was to work with the clock not less than half an hour ahead, and in some cases they worked with it an hour ahead, and occasionally even up to two hours ahead, of the correct time. Perhaps there was a sane reason for that—that is to say, many of the sawmills were situated at considerable distances from the townships, and by reason of the fact of giving themselves the additional daylight it permitted them getting into town considerably earlier, thus enabling them to have a better opportunity to transact their business and attend to other matters if they so desired. During the whole of my experience I never knew of a man who complained as to the principle adopted; it seemed to run very well, and it certainly suited the men who were working in the sawmill industry. As a matter of fact, I have seen certain mills where the work was commenced at between 3 o'clock and 4 o'clock in the morning in order to complete the day's work at midday, and that would leave the balance of the daylight for the benefit of the men so that they could go into town to transact their business or follow up any pleasure they desired. This practice was always arranged mutually among the men, and no trouble was ever experienced.

The Hon. Mr. Ngata.] If the clocks were put forward it would make no difference?—That is so. I may say that some of the mills I have in mind were not far away from town, but others, of course, were fifteen or sixteen miles away.

The Chairman.] Of course, it has to be taken into consideration the question of bush mills as against the timber-yards in towns?—It did not operate to any extent in the yards in town.

It operated so far as the men in the bush were concerned—that is, those men who were felling the logs?—It must have operated in the town yards of the Tiratu Sawmilling Company to a certain extent because they were getting timber in from the mills, and they were working some time ahead of the clock—that is, half an hour or so.

Mr. Field.] You are speaking for the town workers and the men you have mentioned—namely, the men engaged in the timber industry—the men who are mainly concerned are those who belong to the Trades and Labour Council?—We have a large membership scattered throughout the country.

Are there any farm workers who are members of your organization?—No.

Do you see any objection to the people in the various branches of trade—namely, those engaged in the timber industry—putting on the clock and leaving the rest of the people to do whatever they please?—It would be practically impossible in the towns unless it was universal, because the time would not be adjusted to the various circumstances, and it would mean that the very facts I have mentioned as being rather a ridiculous argument would be a sound argument under circumstances such as this, because the labourer would have his time on half an hour, but the trams would not be running to take him to work.

So that so far as the town areas are concerned you must have it either universal or otherwise?—That is so, because everything has to be adjusted accordingly.

I take it that you know nothing of the farm conditions?—Only in a general way. I may say that I have performed work about farms occasionally.

You will also understand that the fruitgrowers would not be able to pick the fruit off the trees until the dew had disappeared?—I understand that, although I do not think it would affect them very much. If the clock was advanced an hour they would be able to start at 9 o'clock by it instead of 8 o'clock, and they could work an hour later.

As long as the dew is on the fruit no one would be able to work at all?—I take it that you mean with regard to the wage workers.

Yes?—That, of course, is only a minor matter in my opinion. As a matter of fact, it is not a very big industry in this country, and therefore I do not think what might be termed a minor industry should be allowed to stop the whole thing coming into operation, as it were.

No doubt you will admit that the dairy industry is a very large industry?—Yes, one has to admit that the dairy industry is a very big industry.

And those engaged in the industry have to commence work very early in the morning?—But I cannot see how the coming into effect of this measure will affect them, because very few of them are affected by the train services. I understand that the bulk of their cartage is done by motor-wagons to-day. If that is so, the motor-wagon does not make any difference, because it does not have to run to a time-table.

But the farmers would have to commence work an hour earlier in the morning?—Presumably so, but I do not think it should affect them very much, and, moreover, I do not think it would be necessary for them to start an hour earlier in the morning if it were not convenient for them to do so.

Supposing the clock were put on an hour earlier and they were to start work earlier, they would have to make their operations fit in with their arrangements, would they not?—I think it would be only a minor number in the community that would be prejudicially affected perhaps. They could in some degree adjust themselves, in my opinion, similarly to what the sawmill workers did at the time I was working there, and apparently they carry out that practice down to the present time.

You are aware, are you not, that a great many of the dairy-farmers send their milk in by train?—Yes, and it would be perhaps in those circumstances where difficulty might arise. Under such circumstances as that one could readily see that they would have to adjust their circumstances to the conditions operating at the moment; but I do not think that that is a general application. I believe that they are more generally relying on motor transport, and therefore that could be adjusted to meet their conditions.

Mr. Sidey.] What are the unions affiliated with your Council?—They are all affiliated in the towns. We have practically the whole of the skilled trades. In fact, I should say that we have perhaps two thousand members affiliated.

You think that your Council represents about two thousand workers?—At least that number.

Mr. Girling.] I understood you to say at your meeting last night that three of your delegates who were enthusiastically in favour of the Bill were recent arrivals from England?—They have not been out here long.

Did they express the feelings of the country people in the Old Country or the townspeople?—They spoke for themselves.

You think it would be feasible, in the event of the country being opposed to the Bill, for Municipal Corporations to bring the Bill into force within their own areas and so get the benefit of the clock being put on?—Of course, that may be worth considering if it were not possible to put the whole Bill through. I do not think it would be as serious in the case of the dairy-farmers as what it has been made out to be from time to time. However, I should like to see the Bill given a trial for at least twelve months, and then if anybody is going to be seriously affected I do not think any one could object to the original practice being adopted if, as I say, it is found to be unworkable. We cannot foresee what these things are going to bring about, but it seems to me to be reasonable to give it a trial for, say, twelve months.

Have you considered the question of the dairy-farmers from the town-supply point of view—that is to say, where it is necessary for them morning and evening to catch trains with their milk?—In the case of Wellington it is not dependent on railway services to get its supply of milk, because the milk is, or the great bulk of it, brought in by motor-lorry from Makara and the surrounding district.

Would it not necessitate the dairy-farmers milking an hour earlier in order to get the milk into town at the same hour as now?—I very much doubt that, because I do not think it would make very much difference to the town supply so far as Wellington was concerned.

At the meeting last night you say that you were all unanimous regarding the measure, and you did not obtain an expression of opinion from the delegate who was against it?—As a matter of fact, he left early, because the discussion and the expression of opinion of the three delegates who had lived in England when the daylight-saving was in operation were so strong against him.

You have no idea what his reasons were for opposing the Bill?—I could not understand it. There were certainly no reasons that he adduced. He assumed that the time would go on for the workmen, but that it would not go on so far as the tramway service was concerned.

You think it would be of benefit to the community to have daylight-saving?—Yes, I think it would be an advantage. I may say that I am a man who likes to have a little vigorous exercise from time to time in order to keep myself fit. I live some distance from the town, and I am able to have a garden. I think this Bill would be beneficial to the community if it were brought into operation by reason of the fact that a man would be able to have a little more time to devote to his garden or any other form of recreation. The advantage would be in the direction of keeping the people healthy by having the extra hour at their disposal.

Would the people not do that in the mornings during the summer-time now?—They do not get up now.

You think it would be better for a man to attend to, say, his garden in the afternoon and not in the morning?—I believe that a man would be in a better mental and physical state to undertake his day's work if his form of recreation were taken in the afternoon and not in the morning.

Mr. Sullivan.] Are any of the agricultural unions affiliated to your Council?—No; only the dairy workers of the Corporation, and you could hardly call that an agricultural union. They merely handle the milk in the station and deliver it.

What is their point of view in regard to the matter?—Mr. Atkinson is their representative, and he is strongly in favour of it.

What does he represent?—The general dairy workers.

The Chairman.] How do you think it would affect the home life—that is, the wives getting up an hour earlier each day?—I cannot see how it will affect them at all.

You think that the tendency will be for better health?—I cannot see how it will affect them. I know that Mr. Atkinson's wife is strongly in favour of it. They just have as much sleep as they do under ordinary circumstances, with the exception of the first night when the clock is put on an hour. Of course, they make that up at the end of the summer when the clock is put back.

Do you think that the tendency will be for the men working in the towns, if they finish their work an hour earlier, to go home, or do you think they will remain in town for the extra hour?—That is rather a difficult question to answer, sir, because that all depends on the man himself. I believe that in the case of those men who have the tendency to look after their homes at the present time they would be inclined to get home in order to attend to their homes, or they may desire to take their wives and families out at times, and I believe that section of the community would get the real advantage of the extra hour. I do not think that it would benefit the man who does not go home now, and I doubt if he would have more opportunity than he has now to drink, but no matter what was done he would not get the benefit.

Mr. WALTER BROMLEY examined. (No. 6.)

The Chairman.] What are you?—I am secretary of the Wellington Trades and Labour Council, and also general secretary of the Engineers' Union throughout New Zealand. I may say that I spent four years at Home when the Bill was in operation there. I was living in the outskirts of Manchester, and was classed as an industrial worker. I spent some time with an uncle of mine in Manchester, who was a big milk-dealer and employed several men. He had to get his milk from the counties of Cheshire and Derbyshire, and I spent some time at Irlam, where I came in contact with farmers. I did not hear, ever since the Bill was put into operation in the Old Country, any one say a word against

it. I remember quite distinctly asking my uncle whether it made any difference to him as regards his supply of milk, and he said that the train came in at 7 o'clock, the same as it did before, and brought the milk, and he said that he did not know of any complaint from the farming community in that respect. I may say that what has been said about the habits of the people does not apply. I am perfectly sure, although it is most deplorable to have to say it, that 90 per cent. of the people in the Old Country do not know the week when the practice starts and when it finishes. The practice there, of course, is to alter the clock on a Saturday night. It may be the wife or it may be the husband who looks after the affairs of the house and winds up the clock and puts it to the proper time, as they are in the habit of doing. On going to bed on the Saturday evening that was my job. I put on the clock according to the notice which appeared in the papers three days beforehand intimating that at the end of the week the time would be advanced by one hour, and I got up the following morning according to what the clock said. I always wake early, and when I called the rest of the household and told them that it was 8 o'clock, and time for breakfast—well, they did not realize any difference at all. The only thing that is noticeable is that when you return from work on the Monday you realize that you are returning home in daylight. The week previous it was dark, and you say, "How quickly summer is coming round." That is the only thing you notice about it. I feel this way about it, that it would benefit New Zealand to a far greater degree than it has benefited the Old Country, and for this reason, that we do not have the amount of daylight in the summer-time here that they have in the Old Country. A question that has been asked of the previous witness has caused me some amusement when it was stated that the dairy-farmer would have to get up in the dark probably if you advanced the time for an hour. But he does that in the winter-time now. If he is one of those unfortunate individuals who gets up too early for daylight in the morning, and works too late for daylight in the evening, he is affected in no way. But for the town worker—and, mind you, a lot of the workers where I was working at Home went in a lot for gardening as a pastime and for augmenting their too meagre incomes—it was a positive boon to those people to have one hour longer in the evening. It has been suggested here that the same thing could be applied municipally, but that would be quite impossible, because you would have no harmony. You would just simply be trying to change the habits of the people, and it would be quite impossible to apply such a system. But if you adopt a system that advances the clock all round, then there is no need for any change in the habits of the people at all. They will just simply follow their usual habits. If it is the custom of a man to catch the last tram home to Miramar at the present time, he will still catch the last tram home to Miramar if the daylight-saving scheme is adopted. When the time was advanced in the Old Country there was a lot of opposition to it before it was tried, but I do not know of any one who is opposed to it at the present time. There was a lot of opposition to it at the time that the Bill was brought forward in the Old Country, but, whether there is a Liberal, Conservative, or Labour Government in power, I do not think it will ever come up for discussion again. The people are quite satisfied with it. I think that is all I have to say.

Mr. Field.] They are all settled down to it in the Old Country as far as you know?—Yes, absolutely.

All sections of the population?—Yes.

And you think the farming community will get used to it here?—Yes, they will get used to it. They will forget it after a week.

Of course, they have to get up earlier in the morning?—They go to bed an hour earlier in the evening.

Is that the practice at Home?—Well, the pictures close an hour earlier, and generally the people then go home and go to bed.

Mr. Girling.] How many months is it in force in the Old Country?—It is in force from the commencement of April to the end of September—six months.

I suppose a lot of alarm-clocks are used?—I do not think it makes the slightest difference. I never realized that I was any more dependent on the alarm during the summer-time than during the winter-time. I do not think any one ever realizes any difference. I may say that as a positive fact I have even heard a discussion going on among men as to whether the clock went backwards or forwards, and they were not positively sure.

Mr. Sullivan.] Was it a subject of general discussion in the Old Country?—Until it was tried there were many political speeches made for and against it. But after it was tried—two days after—the opposition ceased, and no one remembered, figuratively speaking, that the clock was any different.

It just worked automatically as before?—Yes, it just worked automatically as before. Those who went to bed at 9 before went to bed at 8 under the daylight-saving.

How did it affect the wives and mothers? How did the extra hour affect them?—I do not think it was at all noticed. I am quite honest about that. I am perfectly certain that it only affected them in connection with the altering of the clock at the week-end when the daylight-saving commenced, and at the end of the period. They were concerned to that degree and no more. The next morning their week's work started at the customary time; they had breakfast at the customary time. If they had been in the habit of having breakfast at 8 o'clock, they had it at 8 o'clock according to the new time. The fact of the clock being altered never affected them at all in regard to their work.

Did you say you had an uncle engaged in dairy-farming?—Yes; he employs about seven men.

Did the fact of the milking being done an hour earlier, in the heat of the day, have any bad effect on the milk?—No. I never heard him complain. I remember distinctly once asking him if he had found any difficulty in that direction, and he said he thought that the cows must have adopted it too.

We had it in evidence the other day that that was one of the objections of the farmers to the Bill—that milking earlier in the day affected the milk?—Well, then, it would probably be an awkward matter for them to explain why it does not affect the milk in Australia. They are milking practically at the same time in Australia and New Zealand, and it is a sultry climate and much hotter in Australia than here.

So far as your knowledge goes there is no trouble in that direction?—No. And I do think this: that it is a splendid thing to get as much daylight as you possibly can.

But in regard to this question of the dairy-farmers milking, they state that is one of their objections?—It may cause them some concern now, but they will get over that. As I have said, they are milking practically at the same time in Australia as in New Zealand, and it is much hotter over there.

The Chairman.] From what you saw at home you think there is a tendency for men to get more interested in their gardens, and suchlike, if they have this extra hour?—Well, I do not know that you could say that the Bill would be responsible for creating an enthusiasm in a man for gardening who did not have it previously. But the man who is an enthusiastic gardener would have a better opportunity to give it full scope. Some of them play football in the evening, and some of them play cricket.

Mr. Sullivan.] In regard to the young fellows of, say, from eighteen to twenty-four, who are in the habit of knocking around the town, what effect do you think it would have upon them?—As I have stated before—and I am perfectly serious about this—I do not think that the average young fellow or young lady will realize that there is anything wrong with the clock after the first morning, and that consequently they will never alter their habits in any way.

Mr. W. ATKINSON examined. (No. 7.)

The Chairman.] Your full name?—William Atkinson.

And you represent?—I am a delegate representing the dairy workers on the Trades Council.

Will you make a statement?—Yes, sir. I may say that I have paid a visit to England, and have had a good part of two summers there recently during the duration of the daylight-saving, and I wish to endorse entirely what Mr. Bromley says when he says that he never heard a word in opposition or antagonistic to its being in operation. On the contrary, over and over again I have heard nothing but praise for it on account of the great advantages which accrue from it.

Mr. Sullivan.] What part of England was that?—Lancashire. I spent a considerable time knocking about from one town to another. I visited Manchester, Liverpool, Burnley, Blackburn, Preston, Padiham, Great Harwood, Bacup, Rautenstall, Nelson, Colne, Accrington, and also parts of Yorkshire. And in all those places on no occasion did I ever hear a word in antagonism to the operation of the Daylight-saving Act there. It strikes me as a most peculiar thing that the moralists in this country are not demanding the change-over, because daylight is not only advantageous in one direction, it is advantageous in every direction. If, for instance, it is good for the growing plants, it is likewise good for the growing youngsters. Daylight is health and life, in my opinion. And, more than that, I can say that the housewives I have met are most enthusiastic in regard to it on account of the fact that it supplies more lighting and gives a greater opportunity to do better work. There is no artificial light equal to daylight as yet. And if the young people are inclined for sports they get an opportunity to engage in healthy sports much better in daylight than they do in the dark. I may say that I have spent some time myself in connection with swimming. At one time I was a teacher of swimming. And I know the importance of daylight for that particular thing, at any rate. No one can condemn healthy sport in any part of the world, and if this daylight-saving gives another hour to engage in healthy sport I say that it is a very strong argument in its favour. It has been stated that New Zealand would certainly feel the advantages of it equally as well as they do in the Old Country because they get a much longer day there in the summer than we do here. Now, speaking in regard to the question of the dairy-farmers and their milk, I am more than surprised that there should be any opposition from that quarter, especially around Wellington, because when milk is being delivered here in Wellington the one difficulty is keeping that milk cool, and the earlier that milk is delivered the more likelihood there is of getting better and less contaminated milk. I feel sure that the municipal authorities here, or, at any rate, the Milk Committee, will feel glad if this change-over takes place here in New Zealand, on account of the fact that they will not need to cover the carts to the same extent as they intend to do shortly if there is no change-over. I do not think it is necessary to refer much to anything further. Much of the ground that I had intended to deal with has been covered by other speakers. I do not wish to take up your time any more than is necessary. But I must say this: that I feel sure that this would be one of the most popular measures, giving advantages to practically every man and woman, to every worker, and to any one who is inclined to live a greater life, because the more you are enjoying daylight the more you are enjoying life.

Mr. Field.] What dairy workers do you represent?—The Wellington dairy workers.

Those who distribute the milk?—Yes. Those who distribute the milk and those who pasteurize it.

Not those who come into town to deliver milk?—No. Most of those who come into town to distribute milk, from what I have seen of it, are farmers with the help of some youngsters. I only wish we had the power to control those people in order to make them employ proper labour.

I have been told by more than one person from the Old Country that the daylight-saving there is a positive nuisance. That is not what you suggest?—No. I take it this way: that most people judge things according to their breeches-pocket, and, that being so, when a man expresses an opinion I generally look at the individual and ask myself where his interest lies, and I do not always take his opinion as an honest opinion of the general weal and well-being of the community. I am in support of this thing, not for my own particular self, but for this reason: that if it is good for the greatest number I am prepared to coincide with that. And I recognize that a vaster number of people will be benefited by the daylight-saving than will be benefited by the reverse action. It may affect a few people adversely. There is no change that takes place, and no alteration in the law, that does not

affect somebody adversely. I do not say that it will not affect anybody adversely. In fact, as I mentioned at our meeting last night, the burglar element would naturally prefer the darkness to the light.

You are sure you are taking an honest view of it?—I am quite sure.

Mr. Girling.] You likened children to plant-life—that the more sunshine they could get the better it would be?—Yes, I believe that. If you place a child in the dark when it is young it will be quite a dwarf, and suffer from sickness.

Do you not find that children to-day get up at daylight, winter and summer, and take full advantage of the daylight?—Oh, no.

Not in general?—No. People only get up in the morning in time for what they have got to do in the morning. The bed pulls harder in the morning.

In regard to sport, is it not possible that we could enjoy two or three hours in the summer early in the morning perhaps better than in the evening?—I do not think so. A man is never properly awake when he just gets up out of bed.

But is it not better to carry out sports in the morning than in the evening?—No. I may tell you that I never knew of a swimmer breaking a record in the morning. I can assure you that I have never heard of a single case where a record has been broken in the morning.

Possibly a man does not go to bed early enough to be quite fit in the morning?—I do not know. A man generally tries to fit himself to circumstances.

If he went to bed earlier he would be fresher?—I feel satisfied that darkness is the proper time for sleep. Darkness is the time for rest. A man requires more sleep in winter than in summer.

Mr. Field.] Like the birds?—Yes.

Mr. Sullivan.] You say there are no objections to this daylight-saving in the Old Country?—I never heard of a single objection.

Did you go through any of the farming districts in the Old Country?—Not to any great extent. I went through some of the dairy-farming districts in Lancashire lying between the towns, and I have come in contact with dairy-farmers.

Were there any objections made through the newspapers?—I never saw any serious objection to the daylight-saving in the papers, except in some of the South of England papers. Some of the South of England farmers were opposed to it. Of course, opposition is a natural thing for the South of England farmers. The farming element there seem to oppose anything that is likely to be of benefit to the people.

There has been no general protest?—I can tell you that if there was an attempt made to go back to the old method I think it would create a greater outcry in England than anything ever before. I believe that they would never go back to the old system.

You know that there is some feeling on the part of the farming community in this country that it is going to be detrimental to their interests?—I think the farming community is very unwise to think that. The more daylight a man has in the city the greater likelihood there is that he will consume more milk, and the greater demand there will be for that milk. It will mean better business for the farmer.

Mr. Smith.] You cannot give us any definite opinion as to the views of the dairy-farmers at Home?—No. I did not mix very much amongst the dairy-farmers.

Mr. J. M. ILOTT examined. (No. 8.)

The Chairman.] Your full name, Mr. Ilott?—John Moody Albert Ilott.

And you are representing?—Messrs. J. Ilott (Limited). I am managing director of Messrs. J. Ilott (Limited).

Will you make a statement?—Yes, sir. I may say that I have seen daylight-saving in operation in other countries. I have travelled through the United States, Canada, England, and the Continent. When I went away from New Zealand I was not particularly impressed with daylight-saving, but when I came back I was quite convinced that it would be to the great advantage of New Zealand. The majority of the States I visited in America have daylight-saving, and it is working very well there. If there is any country in which it would seem to be difficult to put it into operation it is the United States, where there is a time change of an hour at every meridian. But despite the fact that several districts have daylight-saving, and certain districts have standard time, there is no difficulty at all so far as I could see, and employers throughout the United States told me that under no circumstances would they go back to the old plan. The people I met in the States were most enthusiastic, and the majority of the city workers in the districts in question were able to enjoy far more sunshine as a consequence of daylight-saving. One of my friends, who is a member of the Wellington Chamber of Commerce, was in Philadelphia when the change-over took place, and he told me that there was not the slightest difficulty experienced—people simply went to bed an hour earlier each evening and got up an hour earlier in the morning. I received by the last mail this circular from the American Economic Association in connection with a meeting at Boston. It shows that some territories are working under daylight-saving time and others are working by the standard time. If a great industrial and agricultural community like the United States can do this successfully there seems to be no reason why the scheme should not give satisfaction in New Zealand. In States I visited in Canada the daylight-saving system is in operation. In England one was very greatly impressed by the enthusiasm that was shown for gardening as a consequence of the extra hour's daylight, and, furthermore, it was also noticed that there was an additional interest taken in sport of all kinds. In Scotland, where football is played all the year round, I found that football

matches were played almost every evening; these would commence at 6 o'clock. The enthusiasm for outdoor recreation has developed in a way that was not possible before daylight-saving was put into operation. The only place where I am aware that objection has been raised to daylight-saving is Australia. Australians admit that the Commonwealth and the tropics generally are not suitable for daylight-saving by reason of the fact that it is necessary to have darkness for several hours before retiring to enable the houses to cool down after the extreme heat of the day. I have lived there for months at a time, and any one who has been there knows how essential it is to have your house cooled down before the time for sleep comes round. Daylight-saving was tried in Australia during the hottest summer that they had experienced for many years. The entirely different climatic conditions make it impracticable to adopt daylight-saving there. New Zealand does not have these difficulties to contend with. Conditions are different here, and, while it would be to the advantage of every one to have daylight-saving brought into operation here, I admit that it could not successfully be brought into operation in Australia. Another advantage of daylight-saving is that parents would be able to spend more time out-of-doors with their children. The average man in business or industry is unable to go home to lunch during the day, or, if he does, he has very little time to spend with his family. If daylight-saving were introduced the men would be able to spend more time with their families. Furthermore, there would be a great saving in eye-strain, and health generally would be improved because of the great period spent out-of-doors in the sun. I may say that I found that there was objection to daylight-saving on the part of picture-theatre proprietors and theatrical companies generally, because they found that people generally took advantage of the daylight and spent the extra hour out-of-doors instead of patronizing the theatres. During the summer I was in England one did not feel so inclined to go to a theatre because one had to go there in daylight. It will therefore be seen that the theatrical interests are not so likely to prosper under the daylight-saving system. I do not know much about the farmers' side of the question. When in England I heard that great objections were raised by the farmers before the plan came into operation, but those objections had almost entirely died down after trying the scheme. I met several farmers who informed me that they were keenly in favour of it, and that they would not like to go back to the old plan. In America I found that the trains ran right through to standard time. Many hotels had a notice underneath their clocks to the effect that the clock was one hour ahead of standard time. You could not miss a train, and the very worst thing that could happen would be that you would have to wait an hour for another train. Early morning exercise is not so beneficial as late afternoon exercise, and I submit that if a man plays, say, tennis hard at the beginning of the day he is not so fit to perform his day's work, whereas if it were undertaken at the end of the day he would be in a better position to enjoy his relaxation. Moreover, in the cities people usually have to travel some distance in order to reach their place of recreation, and this would not suit everybody early in the morning. Take, for instance, the case of Wellington: When the new tennis-courts have been opened at Miramar daylight-saving will mean that a great many more people will be enabled to take the game of tennis up than is the case now. So far as my office is concerned, our hours of work are 8.30 a.m. to 4.30 p.m. I would like to make them 7.30 a.m. to 3.30 p.m., but it is impossible to do so, because we are dependent on other business establishments. Daylight-saving would effect the same result.

Mr. Field.] Is daylight-saving in operation throughout the whole of Canada?—I did not go to all the Canadian provinces, so I am not able to speak on that point.

What proportion of the States in America have adopted daylight-saving?—I do not know, for I did not visit every State. Travelling on the main railway-lines I went from San Francisco to Los Angeles, and from there to Kansas City and Chicago, and from there to Detroit and Buffalo, and after visiting other cities arrived at New York. I found that daylight-saving was in operation in most of these districts I visited.

Do you think they will all adopt it in time?—Probably they will do so.

You cannot give us the reason why so many States stand out?—I cannot give you that reason.

Mr. Sidey.] What year were you in the Old Country?—In 1922.

Mr. Girling.] You therefore substantiate the remarks made by Mr. Bromley that the people hardly notice the change-over?—I did not know there was any difference at all, except that one had a longer period of daylight.

You were there during the change-over?—No, I was not there at the change-over.

Some objections were raised in Australia partly on account of the heat?—Yes.

You mentioned something about playing tennis in the morning: do you suggest that the exercise before work is not beneficial to the community?—I do not say that it is not beneficial. As a matter of fact, I have played tennis myself before breakfast, but I should prefer to play it in the afternoon.

Do you not think that early morning exercise is good for the individual?—It makes him tired for the rest of the day, in my opinion.

You are of the opinion, then, that it is better to have your bath, have breakfast, and rush down to work?—That is so, provided, of course, one is able to get the necessary exercise at the end of the day.

Have you come in contact with the dairy-farmers, or any of the farming community, in connection with this matter?—No. There are probably more dairy-farmers in Canada and in the United States than in New Zealand, but they do not seem to be affected adversely by daylight-saving, and therefore it does not appear that there is any reason for the farmers here to raise any objection.

In America and Canada daylight-saving is in operation in the municipal districts, and it seems to be quite satisfactory?—Everybody seems to be enthusiastic about it.

You can only speak from the point of view of the town and not from the point of view of the country?—In many of those territories the number of voters living in the country districts must have been the larger section, and if it was unsatisfactory the country would have voted against its continuance.

Those municipal areas extend for a distance of twenty miles, do they not?—There would be other districts where the daylight-saving system was in operation where the country-folk would represent the greater proportion of voters.

It was well back in the country before you found the districts were not taking advantage of the system?—I believe that some districts fairly close to large cities were not in favour of it, whereas daylight-saving was in operation in other districts that were considerable distances away from large towns.

Mr. C. M. BOWDEN examined. (No. 9.)

The Chairman.] Your full name, Mr. Bowden?—Charles M. Bowden. I am a public accountant. And you represent?—The Association of New Zealand Chambers of Commerce. I am secretary of the Association of New Zealand Chambers of Commerce.

Will you make a statement?—Yes, sir. The evidence that has already been put before you probably covers very much the same lines, but, speaking from the association's point of view, I may say that remits in favour of the adoption of a system of daylight-saving by means of setting forward the clock for a definite period have been adopted by the individual Chambers of Commerce on various occasions. The matter was introduced in the Conference of Chambers of Commerce in 1922, the following remits being introduced and passed:—

“That this Conference supports the endeavour to have the clocks moved forward half an hour in order that New Zealand mean time will be exactly twelve hours in advance of Greenwich time.”

“For the purposes of daylight-saving during the summer months the clock be set forward one hour from the 1st October to the 31st March each year.”

Last year a remit as under was considered and adopted:—

“That Government again be urged to bring in a Daylight-saving Bill, advancing the clock one hour in summer.”

It should be noted that the association is thoroughly representative of commerce throughout the Dominion, membership being by no means confined to the chief centres. Arguments in favour were fully advanced, and the remits were adopted by the Conference only after full discussion. The advantages to dwellers in the cities are surely obvious, and the absence of protests from delegates from the smaller country towns seems to indicate that they at least see no valid objection so far as they are concerned. As regards the hardship to the farmers, of which a great deal has been said, I personally can see little in the objections. Surely it would make little difference to them, as, in any case, they work according to the daylight, not according to the clock. Moreover, after years of operation in Great Britain evidence taken showed that the majority approve, and in America, where a special or local option obtains in regard to this matter, scores of farming districts voted in favour of the measure. Through changed conditions there is not now the same need for farmers to catch milk-trains or be at milk-factories by a very early hour. Home separating or the growth of butter-factories, as distinct from milk-factories, have, I am informed, altered this to a great extent, as has also motor traction. The point may be raised that the same result could be obtained by alterations of the hours of work—viz., from 7 o'clock to 4 o'clock in the trades, and from 8 o'clock to 4 o'clock in professions. This, however, would present much more difficulty as involving endless adjustment throughout the country. It would necessitate alterations in train and steamer times, meal-times, &c., with resultant tremendous cost for reprinting of time-tables, &c. From the point of view of health, particularly in the case of workers—both male and female—in factories and offices, and from the point of view of children, the arguments are all in favour. It would render possible also more family recreation. Commercial men generally would favour setting the clock forward one hour for the summer season. The alternative proposal to adopt the twelve hours advance on Greenwich mean time, or, in other words, to advance New Zealand standard time by half an hour, is another proposal well worthy of consideration. It has the advantages of the proposal first mentioned, but, of course, in less degree. In addition it would make for saving in lighting and fuel-consumption through obviating or reducing the peak load. The former proposal—that is, to advance the clock an hour in the summer—has not that argument in its favour, as it is a summer measure only, and it is in the winter—say, between 4.30 and 5 o'clock—that peak load in lighting plants occurs. I am of opinion that the desired reform must be brought about by legislative enactment; that clocks must be put on. Uniformity would be improbable otherwise, and the resultant confusion would be inimical to the movement.

Mr. Sidey.] Is there any Chamber of Commerce in the country which has raised any objection to this daylight-saving?—Not to my knowledge.

You have quoted a resolution supporting the putting of the clocks forward half an hour in winter and an hour forward in summer: is that intended to suggest that the clocks should be put forward one hour and a half in the summer-time?—No. I think that was an endorsement of the principle of the desirability of daylight-saving.

Has your association considered the disabilities in the winter-time if New Zealand mean time is exactly twelve hours in advance of Greenwich time?—I could not speak on that point. I have only recently entered into these duties, and I was not present personally at the Conference. I believe

that there are difficulties if the clock is put forward in winter-time, particularly as regards Southland. I am familiar with some of the arguments put forward, principally as regards Southland in winter-time. I was very interested in reading the report of a delegation which I think waited upon the Prime Minister when he suggested that what they desired could be obtained by agreement between the employers and the employees. If so, could not an arrangement be made to exempt Southland?

Do you **not** realize that there are great difficulties in making mutual arrangements between employers and employees in connection with daylight-saving?—Yes. I believe that if anything is to be done it will have to be done by legislative enactment. It seems to me that individual arrangements would be unworkable.

Would there not be some objection in the southern part of New Zealand with respect to the half-hour in the winter-time?—Probably. But, of course, it would be affecting a rather smaller section of the community. The rights of the majority of the members of the community should not be disregarded.

Is it not in the interests of the whole of New Zealand that there should be the same hours in the southern part as in the northern part?—Speaking generally, of course, that is so. But I do not think the difficulty is insuperable. There might be a half-hour difference as between Wellington and Invercargill, let us say.

Are you aware that the result would probably be to bring about a change of office hours in the south in the winter-time?—Yes.

Are you aware that in Dunedin they have had hydro-electric power for some considerable time?—I was not aware of that.

And they have a sliding scale of prices by which the electricity is sold, the higher prices being at the time of the greatest demand—the peak load—and you will recognize that under such circumstances it would be impossible for the employers to obtain power when the lower-priced power is on?—Yes. I was not aware that they were in that position.

And that therefore they are against the twelve-hours proposal?—I did not know that.

Mr. Girling.] Are you aware that the Dominion Farmers' Conference passed a resolution opposing the Daylight-saving Bill?—I have a recollection of reading some newspaper reports to that effect a little time ago.

Do you suggest that they have not given the matter proper consideration? I think the principle has not been properly explained to them.

The putting-on of the clock?—No, the effect.

Your Associated Chambers of Commerce are unanimously of the opinion that it could be brought into operation here without causing any inconvenience?—Those remits I have quoted were passed at the Conference. I was not present myself at the Conference, but the remits were passed on two occasions.

Of course, the Associated Chambers of Commerce have a Council, have they not?—Yes.

And they are not country people?—Some of them represent country towns though.

But they represent the interests of the towns?—They represent commercial interests.

Therefore they would not express the opinions of the farmers?—No.

So that it is the right of the Farmers' Union to express the opinion of the country people?—That is so.

You do not know how it would affect the dairy-farmers?—No. The impression on my mind is that they work by the sun, and not by the clock. A dairy-farmer does not get up in the morning because the clock says 5 o'clock; he gets up because it is daylight.

He is not hampered by any union hours or anything like that?—He does not work by the clock.

Mr. Hockly.] Can we take it that the people in the towns fully understand the effect of this measure?—I think so. It has been discussed in the newspapers so often.

Is there any reason why the matter should not be just as clear in the country?—The reason is that they have not got the same facilities in the way of newspapers and organization.

I cannot subscribe to that. The people in the country are very keen on reading their newspapers. You would not put it down to lack of intelligence?—No.

You think that they are just as capable of forming a conclusion as to what the effect would be to them as the people in the towns are so far as they are concerned?—Oh, yes.

You have mentioned in your evidence that "The point may be raised that the same result could be obtained by alteration of the hours of work—viz., from 7 o'clock to 4 o'clock in the trades, and from 8 o'clock to 4 o'clock in the professions. This, however, would present much more difficulty as involving endless adjustment throughout the country. It would necessitate alterations in train and steamer times, meal-times, &c." So far as the employees in the dairy factories are concerned, they would have to comply with the general meal-hours—that is to say, they would have to have their breakfast at a certain hour, and their lunch at a particular hour, and, therefore, that would mean they would have to arrange their work in accordance with the interests of the industry. If the dairy factories were to commence an hour earlier, would it not follow that the men who milk the cows have to start an hour earlier?—Yes, those who are directly affected. Those who take their milk to the station to catch an early train would probably have to start milking at an earlier hour.

But they all do?—What may be a hardship to one township may be an advantage to another, because, as we know, the train arrives later at each station as it goes along.

So far as the factories are concerned, if daylight-saving were brought into operation there are a very large number that would have to start work an hour earlier. You have told us that the farmers do not work by the clock. I do not know whether you have had any experience, but the fact remains that as long as there is any daylight the farmer will work. You will agree that if a farmer starts to work an hour earlier it means that an hour a day is added on to his daily toil?—If he continues to work to dark it would.

I will give you an illustration. I know of a family who are milking 100 cows, and they have to get up at a quarter to 4 at the present time, because they have to get something to eat before they commence work, and that means the women have to get up half an hour earlier than that. If they get up now at quarter to four it means that if the Bill were put into operation they would have to get up at quarter to three, and, as I say, the women would have to get up half an hour earlier than that. Do you not think that that would be a hardship, and a distinct hardship, to inflict upon those people?—Yes, but with reservation. Is it essential that the dairy factories should receive the milk earlier than they do now?

I think I have already told you that the employees have to be governed by the meal-hours, and it has far-reaching effects on the townspeople if everything is not uniform. There is another point that I would like to bring before your notice, and it is that in the middle of the summer it is most detrimental to a herd to move them in the heat of the day, and you have to wait until it is fairly cool to move your cows to the milking-yards. If the clock were put on an hour it would mean that the cows would have to be moved in the heat of the day?—I thought that in the industry daylight governed the whole of the operations, and not the clock. Perhaps I have misunderstood the position.

I am sure you are wrong?—Apparently I have misconstrued the effect. I was under the impression that, except in a very few instances, daylight governed the business, and not the clock.

Mr. Smith.] Are you aware that on some of the Chambers of Commerce there are country representatives?—Yes.

As members?—Yes.

Are you aware that at the meetings of those Chambers of Commerce that expressed their approval of this measure the farmers were present?—I am not aware of it. I am speaking from the knowledge of the deliberations of the individual Chambers of Commerce.

You have no personal knowledge of the conditions operating on dairy farms in the country?—No.

It may be possible that a good deal of opposition as to the proposed measure may have arisen as a consequence of prejudice—that is to say, engineered by misunderstanding of the proposal in its initial stage?—It is possible.

Mr. R. W. McVILLY, General Manager of Railways, examined. (No. 10.)

The Chairman.] Will you make a statement on the Summer Time Bill, Mr. McVilly?—Yes, sir. Of course, I have to look at it from two points of view. As a man interested in sports I would like to see the men take part in sports as much as possible; and I also have to look at it from the point of view of the railway operations. If the time of the clock is put forward an hour in the summer-time, and put back an hour in the winter-time, I do not think it would affect the time-tables at all. I do not think it will be necessary to recast the time-tables. It would work automatically. The trains would mostly have finished their journeys on the day before the alteration is made in the time, and would start at the new time on the following day. We would save about an hour's lighting. That is all. That is the position so far as we are concerned.

Mr. Siley.] You see no difficulty whatever, Mr. McVilly, in the introduction of the scheme, so far as the railways are concerned?—So far as the time-table is concerned, no.

It has been suggested that there would be a difficulty in that connection to a considerable extent?—Oh, no. There is absolutely nothing in that.

Have you made any estimate as to the saving it would be to the Railway Department?—No. I have not gone into that matter at all. I know there would be a saving in the lighting, of course, but to what extent I cannot say at the moment.

It would be considerable, would it not?—It would be an amount worth taking into consideration. It would aggregate to a large sum in the year.

It would affect not only the stations, but also other lights, and a considerable number of trains?—It would effect a saving in the lighting of engines, and matters of that kind; but you must bear in mind that we are equipping more and more of our locomotives with electric headlights, so that the use of oil-lamps is practically discontinued, and the use of acetylene-gas lamps is also being gradually wiped out.

And the carriages?—In the carriages, of course, we have Pintsch gas, except on the Main Trunk and more important trains, which are being equipped with electricity.

There is one other question I would like to put to you. It has been suggested that the time of receiving milk at the factories is determined by the time that the railway-train runs, and that as the dairy-farmer works by daylight and not by the clock he will have one hour less to get his milk ready for the train. The question I want to ask is whether you see any difficulty in connection with such cases in making a modification of your time-table during the time that the summer time would be in operation?—The position there would be that the time-table would automatically become fixed by the alteration of the clock, but, so far as the arranging of the time-table is concerned, the runs of the trains are fixed according to the requirements of the business and to enable us to give the people the best facilities. If what is at present 7 o'clock in the morning becomes 6 o'clock in summer, any of our trains which are now timed to leave at 7 a.m. would automatically leave at that hour—present 6 o'clock would become 7 o'clock; but so far as the running of additional trains to meet the requirements of the dairy factories or any other class of country traffic is concerned, that would, as at present, depend entirely on the condition of the lines, and the number of trains on the lines. There are lines to-day on which it is not possible to put an additional train on at a certain hour.

For instance, out of Wellington there is only two periods in the day, of about an hour each, where we could get a train in at all, and the same thing applies to some extent to Dunedin, Christchurch, and more particularly Auckland, both north and south. It is an exceedingly difficult thing to get a train in there at all.

Mr. Hockly.] It is a question of the volume of traffic?—Yes.

On the question of lighting, would it not cut both ways? There would be a saving in the evenings, but would it not cost more in the mornings?—Oh, no. I do not think so. The trains lighted in the morning at the present time are early passenger-trains lit till about 7 o'clock. The putting-forward of an hour would not make any difference. You see, it is daylight about half past 3 in the summer-time.

It is proposed to start it the first Sunday in October?—It would not affect the trains in any way.

You would have to start the trains at 6?—Yes, they would have to start at 6, but lighting would not be necessary then.

On the first Sunday in October?—No.

Mr. Smith.] There appears to be only one difficulty, and that is that the Auckland express would be an hour late?—Yes, on the first day. We would have to alter the crossing times of that train. It would be really running on the old schedule till it finished its journey.

There is just that one train?—Yes, there is just that one particular train only. We would have to run it an hour late from, say, midnight. It would then be at about Raurimu. We would have to run it an hour late on the clock.

That is the only train which is affected?—Yes.

APPENDIX.

The following letters were received by the Clerk of the Summer Time Bill Committee and read :—

Main Road, Karori, 21st August, 1924.

The Chairman, Summer Time Bill Committee, Parliament Buildings, Wellington.

SIR,—

The following resolution was passed by the Wellington Suburbs Farmers' Association :—
 "That the Wellington Suburbs Farmers' Association strongly protests against the introduction of the proposed Summer Time Bill, as it is not in the interests of the farming community and would tend to make agricultural life even less attractive than it is at present."

Yours faithfully,

R. ISAACS,

Secretary, Wellington Suburbs Farmers' Association.

Stoke, Nelson, 15th August, 1924.

To the Chairman, Daylight-saving Bill, House of Representatives, Wellington.

DEAR SIR,—

I understand from the newspapers that the above proposed Bill is under consideration, and that your Committee is hearing evidence as to its merits and demerits.

I do not know whether I am in order in writing to you upon the subject, but if it is permitted may I be allowed to point out some of the results the proposed Bill will have upon the orchard industry especially.

In shearing, harvesting, and haymaking the facts are too evident of its injurious effects.

In regard to the orchardist, from October to December spraying operations are carried on every fourteen days. It is imperative, of course, that trees should be dry before the sprays are applied. Under present conditions, owing to a slight shower or heavy dew, it is often impossible to start work before 9 or 10 a.m., or even later. So many hours of sunlight and warmth are necessary before starting work. Under the proposed Bill the position would be still further aggravated.

In regard to the picking of fruit, from December on the same applies. Hands arrive at 8 a.m. and are unable to start work because of the moisture still upon the fruit. Again so many hours of sunlight are necessary. Any delay in picking may have, and often has, serious consequences upon the grower, as he is entirely dependent upon the weather for the harvesting of his year's work.

The proposed Bill makes the position of the man on the land still more difficult, and yet we are asked for production and still more production.

I could, sir, amplify more arguments against the proposed measure, but I must confine myself to this one item of production—fruitgrowing—and ask, sir, that our position and industry may not be hampered and hindered and our expenses unnecessarily increased by this proposed change.

I have, &c.,

C. W. PITTS BROWN.

Marine Department, Wellington, 22nd August, 1924

The Chairman, Select Committee on Daylight-saving Bill, Parliament Buildings, Wellington.

DEAR SIR,—

I forward herewith a report which has been prepared by Captain Hooper, Nautical Adviser, relative to the effect of the Daylight-saving Bill, if passed, in various places in New Zealand.

A graph which illustrates the matter accompanies the report, and, if desired, I shall be glad to arrange for Captain Hooper to give further explanation.

Yours faithfully,

G. C. GODFREY, Secretary.

Nautical Adviser's Office, Wellington, 19th July, 1924.

Memorandum for the Secretary, Marine Department, Wellington.

Re SUMMER TIME.

1. The fact of using prescribed seasonal times such as a summer time in the older countries has not been found to affect navigators in any way, and if the summer time is adopted within the Dominion it will not in any way affect the navigation of either local or visiting vessels: but if the summer time is adopted it will be necessary for this Department to issue a Notice to Mariners drawing attention to the fact.

2. The proposal to adopt a prescribed seasonal time to be used for summer only, and to make no provision for winter, would appear to be for the purpose of satisfying the enjoyment side of the community's life only: whereas what is much more important from an industrial efficiency point of view is to endeavour to adjust the restricted available daylight working-hours of winter so as to suit the requirements of the generally accepted working-hours of the people. On investigating the official sunrise and sunset tables for Wellington and Auckland, which are computed and published by me annually in the "Nautical Almanac," it will be seen that in midwinter at Wellington it is daylight forty-three minutes before working-hours commence at 8 a.m., and that work ceases at 5 p.m., thirty minutes after daylight has passed, showing that at midwinter a portion of the usual working-hours at Wellington is performed after sunset, and therefore must be performed with the aid of artificial illumination. This is most uneconomical, and could, in the case of Wellington at least, be avoided by a winter-time adjustment by slightly advancing the clock. This would allow of all work at this place being performed within the limits of sunrise and sunset during the winter months. At Auckland in midwinter daylight ceases eighteen minutes before 5 p.m., and work commencing at 8 a.m. has allowed fifty-six minutes of daylight to pass by. This also is uneconomical. I have not had much time to investigate the conditions affecting the southern towns, where, owing to geographical location, advantages and disadvantages of seasonal times might be found to be of larger dimensions.

3. I would suggest the advisability of not only considering a seasonal time for summer, but for winter and summer simultaneously, so as to improve, if possible, the efficiency of our industrial winter working-hours in addition to our summer enjoyment hours.

4. The subject is peculiarly involved in relation to our farming community at places situated east and west of our time meridian, and I would submit that the opinions of such persons as the Government Astronomer, Dr. Marsden, Professor Sommerville, and some other scientific gentlemen who have deeply studied time problems within this Dominion would be of much value.

GEORGE HOOPER, Nautical Adviser.

Nautical Adviser's Office, Customhouse, Wellington, 20th August, 1924.

Memorandum for the Secretary, Marine Department, Wellington.

Re SUMMER TIME.

ADVERTING to my letter of the 19th ultimo, I submit herewith, in graphic form, the times of sunrise and sunset at Auckland, Wellington, Christchurch, and Dunedin; also, at Otautau, Southland, a very westerly settlement, and at East Cape, a most easterly settlement.

The graph covers the period between the 1st of September, 1924, and the 31st October, 1925. A glance at the graph will immediately show the length of the day at any of those places on any day of the year, this being the vertical measure of the squares between the upper and lower black curves; whereas the length of the night is ascertainable by subtracting the length of the day from twenty-four hours. The length of the forenoon at any place on any date is easily found by reading in the margin the hours and minutes of the horizontal line cutting the curve on the date required and subtracting this from twelve hours. The length of the afternoon may be read from the margin directly.

Assuming the majority of industrial work of the Dominion to be performed between the hours of 8 a.m. and 5 p.m., it will be seen by the graph that such work might easily be performed within the hours of natural light at any place within the Dominion during the greater portion of the year. However, curves on the graph under the months of May, June, and July will show that during the midwinter at some of the places it would be impossible to perform the usual hours of work without the aid of artificial light, as, for instance, at Otautau, Southland, where the sun rises at 8 a.m. and sets at 4 p.m., a circumstance clearly defying any desire to avoid using artificial light during ordinary working-hours; whereas at the same period at Auckland the entire hours of daily labour, some of which are now performed by artificial light after sunset, could be embraced within natural light hours throughout the winter months by a slight adjustment of the times at commencement and termination of work; not necessarily any interference with any existing clock or other time-indicating devices.

The necessity for illuminating workshops, factories, stores, warehouses, sheds, and other places where work usually ceases at 5 p.m. for the last half-hour in the day could be eliminated on most days, clearly a significant saving at peak-load hours.

The curve will show that a slight adjustment of the starting and finishing times for workers (apart from the orthodox times of 8 a.m. and 5 p.m. starting and finishing times of work) at other places during the winter months would enable a similar achievement to be accomplished in respect of those places.

The efficiency of the workers in most industries would appear to be capable of easier attainment when their work is performed under natural light conditions, and the effect of working under artificial light on the eyesight of youthful workers of both sexes is evidenced in many directions. To utilize in industry to its fullest extent the full period of available daylight would appear to be a true form of daylight-saving, and from the graph it would appear that the most benefit to be derived from any system of daylight-saving would be most pronounced during the winter months.

The benefits or non-benefits attributed to early rising are problematical, and it has not been advanced in its favour that much benefit is obtained to persons who habitually are out and about at their occupations during the periods of early morning before the sun has exercised its full radiating effect on the earth's surface. It certainly is experienced as much more congenial to be out and about after the sun has risen for some hours, but the actual benefits or non-benefits of this have so far not been fully emphasized.

It must not be overlooked that to an observer the actual commencement and termination of the daylight period varies somewhat indefinitely at different places and at different times of the year, as the crepuscular or twilight period in that place varies in accordance with the departure of the sun's apparent path from a vertical circle when rising or setting. It may be of interest to know that the duration of midsummer twilight at Auckland in the north is one hour fifty-seven minutes, and at Otautau in the south-west is two hours fifty minutes; whilst the midwinter twilight at Auckland is one hour and thirty-nine minutes, and at Otautau it is one hour and fifty-five minutes.

I do think if any alteration in the time of the community is made that such should be performed comprehensive throughout all the seasons of the year, and should not be confined to summer-time alone, although the proposed alteration to advance the clock one hour during the summer months is very commendable and I think would result in much benefit to the community. I have not yet heard of any valid objection to the proposal.

GEORGE HOOPER, Nautical Adviser.

THE ASSOCIATION OF NEW ZEALAND CHAMBERS OF COMMERCE.

REMITTS in favour of adoption of a system of daylight-saving by means of setting forward the clock for a definite period have been adopted by the individual Chambers of Commerce on various occasions. The matter was introduced in the Conference of Chambers of Commerce in 1922, the following remits being introduced and passed:—

"That this Conference supports the endeavour to have the clocks moved forward half an hour in order that New Zealand mean time will be exactly twelve hours in advance of Greenwich time."

"For the purposes of daylight-saving during the summer months the clock be set forward one hour from the 1st October to the 31st March each year."

Last year a remit as under was considered and adopted:—

"That Government again be urged to bring in a Daylight-saving Bill, advancing the clock one hour in summer."

It should be noted that the association is thoroughly representative of commerce throughout the Dominion, membership being by no means confined to the chief centres. Arguments in favour were fully advanced, and the remits were adopted by the Conference only after full discussion.

The advantages to dwellers in the cities are surely obvious, and the absence of protest from delegates from the smaller country towns seems to indicate that they at least see no valid objection so far as they are concerned. As regards the hardship to the farmers, of which a great deal has been said, I personally can see little in the objections. Surely it would make little difference to them, as, in any case, they work according to the daylight, not according to the clock. Moreover, after years of operation in Great Britain, evidence taken showed that the majority approve, and in America, where a special or local option obtains in regard to this matter, scores of farming districts voted in favour of the measure. Through changed conditions, there is not now the same need for farmers to catch milk-trains or be at milk-factories by a very early hour. Home separating or the growth of butter-factories, as distinct from milk-factories, have, I am informed, altered this to a great extent, as has also motor traction.

The point may be raised that the same result could be obtained by alterations of the hours of work—viz., from 7 o'clock to 4 o'clock in the trades, and from 8 o'clock to 4 o'clock in professions. This, however, would present much more difficulty, as involving endless adjustment throughout the country. It would necessitate alterations in train and steamer times, meal-times, &c., with resultant tremendous cost for reprinting of time-tables, &c. From the point of view of health, particularly in the case of workers (both male and female) in factories and offices, from the point of view of children, the arguments are all in favour. It would render possible also more family recreation.

Commercial men generally would favour setting the clock forward one hour for the summer season. The alternative proposal to adopt the twelve-hours advance on Greenwich mean time, or, in other words, to advance New Zealand standard time by half an hour, is another proposal well worthy of consideration. It has the advantages of the proposal first mentioned, but, of course, in less degree. In addition it would make for saving in lighting and fuel-consumption through obviating or reducing peak load.

The former proposal has not that argument in its favour, as it is a summer measure only, and it is in the winter—say, between 4.30 and 5 o'clock—that peak load in lighting plant occurs.

I am of opinion that the desired reform must be brought about by legislative enactment; that clocks must be put on. Uniformity would be improbable otherwise, and the resultant confusion would be inimical to the movement.

CHAS. M. BOWDEN, Secretary.

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