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DISCUSSION

OF

FORESTRY PROBLEMS

STATE CONSERVATION COMMISSION
OF CALIFORNIA



SACRAMENTO

FRIEND WM. RICHARDSON - - - SUPERINTENDENT OF STATE PRINTING
- 1912



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REPORT

OF

Public Meetings Held Before the State Conservation Commission to Discuss Questions Relating to Forestry in California, on March 26 and 27, 1912.

TUESDAY, March 26, 1912.

The meeting being called to order the following proceedings were had:

MR. CUTTLE. We have drawn up a rough sketch of a bill here, but I understand you people are all interested in timber lands and lumbering, and I shall be very glad to hear from you on any of those matters, either fire protection, reforestation, or anything. We have a reporter present so that we shall have a record of anything beneficial to yourselves or the Commission. If any of you have anything to present to the Commission you take it up and make a report on it, and we will have the benefit of your views on those lines. The idea of the Commission is to cooperate with the lumber men, not to antagonize them, or secure legislation harmful to them. We want to make the best use of all the natural resources of the State and bring about their development along the lines that will be of the best use to the people at large.

MR. BAUMGARTNER. I will add to what Mr. Cuttle has said, it has been deemed best to confine the discussion to-day to protection from forest fires. Other divisions of the subject are to be taken up in turn and I believe the gentlemen who are to appear and present the various matters have timed themselves somewhat upon that schedule, so that we should confine the discussion here to forest fire protection.

As we talked it over yesterday (as Mr. Cuttle was not present), we thought that at first we would have any one that might be present present his views and ideas on the general subject of forestry and with reference to forest fire protection; and later we would take the bill which has been drawn as a basis of discussion and read it section by section with a view to getting such instructive criticism as might be brought out.

Just now we shall be glad to hear from any of you gentlemen, just informally, as you may desire to present your views, and we will get a record of them, and we will ask each gentleman who speaks to announce his name and what interest or phase of the subject he represents, so the reporter may get it. We are ready to hear from you.

I move that Mr. Cuttle act as chairman of this meeting.

(Commissioner Cuttle takes the chair.)

THE CHAIRMAN (to a gentleman in the audience who arises to speak). Your name is C. R. Johnson?

MR. JOHNSON. I represent some of the redwood industry. At a meeting of a number of redwood people yesterday afternoon they asked Mr. Burnett, of the Hammond Lumber Company, Mr. Buzzard, who

represents a very large timber interest in the redwoods, and Mr. Wilson, who represents the same thing, and myself, to come here to-day and make a statement of our position as redwood manufacturers. Mr. Muir, who also represents large redwood interests and is president of an association formed in part to protect forests from fire, is also present.

I think I can say for the redwood interests, that our position is, that we believe that the present laws on the statute books of the State of California are sufficient to protect the interests of the community at large from fire in the redwood districts.

I do not know whether you gentlemen are familiar with the redwood section or not; but of course it goes without saying that you will visit that section and become familiar with it, if you are not already so, before framing a law governing the fire question. It seems almost useless to say that the redwood belt lies very close to the ocean, so close that the people back of us a ways in the valley speak of us as the fog interests. That in itself is a great protection from fire. The redwood belt lying so close to the ocean with rivers running through it, and the rivers flowing towards the ocean, and there is no quantity of agricultural land that lies in the watershed covered by the redwood timber, so that the problem of protecting agricultural land, it does not seem to us, is one of the betterments in which the State is interested as regards the redwood timber. We have statistics as to a number of fires that have taken place in the redwood belt in the last few years, and we believe that those statistics show that of all kinds of property, inflammable property, that redwood timber is as nearly immune from fire as any other property that can be burned. We think sometimes that the fire in San Francisco, after burning up the brick and steel buildings, stopped at the buildings covered with redwood.

Now the redwood belt lying in such a moist climate has a great deal of underbrush, and the trees are covered, as you know, with a heavy bark. No system of logging has yet been devised by redwood people—although I may say that a great deal of thought and time and expense have been put upon it trying to find a system—but no system has yet been found by the redwood people where they can log without the aid of fire, to burn the underbrush and to burn the bark. We have no doubt that if such a law as is calculated to pass should pass, that the State Board of Conservation Commission would allow the redwood people to continue about as they do now in logging with fire; in fact, they would almost have to or the redwood industry would be greatly handicapped; but I think you can imagine times when there could be a conservation commission that might not allow it, and we do not feel that the redwood people should be made to pass to anybody the privilege of setting out fires in their territory.

In addition to the facts that I have stated about the natural conditions of the redwoods, I would say there has been a movement in a section of the redwood belt at least to add artificial protection against fire; and we believe that that movement from private motives, or selfish motives, would really be as efficient or more efficient in protecting the redwood belt than any State effort can be.

I think that is the case as far as I know it of the redwood people.

THE CHAIRMAN. You were referring to the redwood districts, were you not, entirely, Mr. Johnson?

MR. JOHNSON. Yes, sir; that is the only district I claim to know anything about.

THE CHAIRMAN. And not to other portions of the State?

MR. JOHNSON. I know nothing about them.

MR. W. S. BURNETT. I am vice-president of the Hammond Lumber Company, a redwood lumber proposition.

Mr. Johnson has outlined our position, the position I believe of all the redwood operators and owners of timber land, accurately, but it might be considerably extended. It might be extended to cover some point that would arise in your own mind with reference to this matter of conservation. I shall be glad to elaborate them now, or if in outlining the program for general discussion with reference to forest fire protection you think better to call on some other interests; that is to say, some other kind of timber interests, I wish you would do so, and then possibly let us—

THE CHAIRMAN (interrupting). I think it would be very well to go ahead with the discussion of the conditions, the redwood district that you are interested in. You might discuss that part now.

MR. BURNETT. Mr. Johnson has touched on the peculiar physical properties of the redwood, which makes it from a practical standpoint, in green timber, at all events, immune from fire ravages. There is some literature on the subject with which I presume the Board is familiar. There is the treatise on the redwood, gotten up by the U. S. Department of Agriculture, Bulletin No. 38, gotten out in 1903. That affords considerable information; and then there is also the third biennial report of the State Forester of the State of California, published in 1910. There may be statements contained throughout each of these articles that might require some modifications, but there is enough there to show our position with reference to fire protection in regard to the redwood industry.

Now, so far as the green timber is concerned, we are not concerned at all with fire; fire does not amount to anything in it—I think we may say that. There are evidences of fire and fire going through it, but it never has resulted in the destruction of the timber, as is the case with other timbers.

THE CHAIRMAN. You mean by that, Mr. Burnett, that there is no danger from forest fires in the redwood belt of timber?

MR. BURNETT. When fire does arise there it does, probably, some damage to the timber. We find evidence of fire, but it does not destroy logging. From a conservation standpoint, it does not destroy the timber itself outright. It does not convert a forest land into a waste, as is the case with other timber lands, and it therefore has no effect in that way on the question of watersheds, and drainage, or any of those indirect and broader features of conservation so far as fire is concerned in the redwood forest. I can say that unqualifiedly. There is no annihilation of the forest at all. Of course, looking at it more narrowly, it is true that occasionally a loss happens. The burning of the base of the tree might ultimately result and, perhaps, does result to a certain extent in the destruction of those trees. They are more likely to fall.

The redwood industry in California has been recognized by prior legislation as being something peculiar in itself. It has been recognized by prior legislation as distinct and different from other classes of tim-

ber. It is peculiar in the respect I have mentioned; that is to say, in reference to the fact that standing green timber is not annihilated or destroyed by forest fire. It is also peculiar in the respect pointed out by Mr. Johnson in that it is recognized, and recognized in these authorities to which I have referred, that the only practical means of logging redwood is with the agency of fire. Now, I haven't the statutes of 1911 here, but to substantiate my statement in that regard, in 1905, I think it was, the legislature passed the act creating the Forestry Department; and there was a provision in the criminal law, in the Penal Code, which made it a misdemeanor to set out fire during the dry season, there being no qualifications described at all as to the conditions surrounding the setting out of that fire. That, as you undoubtedly know, was held to be unconstitutional by the Supreme Court of California in a case that arose where precautions had been taken and no fire had spread from it, nevertheless an attempt was made to convict the person who had set out this fire. And so it was held by the Supreme Court of California that that unnecessarily abridged the rights of persons who were interested in using fire as an agency to clear their land or otherwise. Thus, in that penal provision, there was an exception provided that fire must be set out as customarily it was used in the logging of redwood. Now, as I say, the Supreme Court declared that particular section unconstitutional, and now there is a new section which only makes it a misdemeanor to set out fire during the dry seasons where there is a lack of the ordinary care in setting out that fire, and the taking of the proper precautions. So, of course, such particular exception has gone out of the law, but as long as we are logging customarily we come within the general exception of the law, namely, that we can set out fire as long as we use care.

Now, in 1911, as bearing on the present state of the law, the legislature passed an act at the last session of the legislature, which gives to the Forestry Department of the State the power to notify any person who has got an area of timber land which is regarded as a nuisance or unsafe as creating a fire hazard, to notify the proper person that he must clear that land, and, failing in obedience to that order, power is conferred on the Forestry Department to have the work done, and the expense of doing that work is made a lien upon the land.

That is the present state of the law, so that coming up on the redwood proposition, under any of those peculiar situations—and they may exist, particularly with reference to the cut-over lands—where there is a fire hazard that is a menace to the community. In any such case as that there is a power under the law as it stands to-day for the State Forestry Department to compel that particular territory to be cleared up.

Now, getting down again to the more practical side of it, I have really touched on fire in the green timber as being something with which nobody need be concerned with particularly, and particularly in the northern part of the State in the redwood belt it is even less prevalent.

THE CHAIRMAN. You refer now particularly to the redwood belt?

MR. BURNETT. Entirely. The redwood belt of course extends from Mendocino County up to the line. Now, you can see as far as fire in the green timber is concerned, not having any effect on those questions of rainfall and water propositions, in that country itself particularly, there being where the redwood exists an infinitesimal quantity of agricultural land, you can see that that thing might be left very well where

it is, and there is no occasion for legislation in respect to it. As far as cut-over lands are concerned, there is a hazard of fire unquestionably, and there have been fires in cut-over lands, but even there the situation is peculiar. The manner of reproduction of the redwood—the redwood reproduces itself by sprouts from the stump and not from seedlings. That, of course, is a thing that you and we, too, if we can only afford the luxury, are interested in, namely, in the second growth of the redwood; and it is perfectly true that when a fire goes over cut-over lands it destroys for the time being the hope of a second growth. But it does not destroy as effectually as it does other growths of timber, because the reproduction of the redwood, as will appear from the literature to which I have referred, is on the ratio of one hundred to one, that is to say, ninety-nine per cent of redwood is reproduced by sprouts from the burned stump, and only one per cent of it comes from the seedling. Now, the result of that is, even if fire does go over the cut-over lands, it is true that the sprouts that have already made headway are burnt; but there is still the source of further reforestation from the some old stump.

Now, on this proposition of logging, and the necessity of affording fire protection and legislative recognition, this report of the State Forester fully recognizes that; and, not only is fire essential for the logging, but if there was a fire it would be a veritable fire-trap in the absence of proper burning, so we have got to face fire in the redwoods no matter how it is done, whether the fire takes place before the logs are taken away, or, as it is done now, before the logs are sawed and cut up so as to permit of their rolling; we have got to face fire in the redwood forests, even if it is to protect the redwood forest itself. That is all brought out in the report of the State Forester.

Now, it is interesting to notice, too, as a practical matter, if any of you have ever had occasion to examine mortgages that have been given by companies owning or operating timber lands, where those lands are redwood lands, there is never a provision or right to patrol them. The fire risk is looked upon as nil. If, on the other hand, the land is situated in Washington or Oregon, you will find a provision drawn that gives him control of that thing. In other words, the outsider recognizes the proposition that there is no substantial risk from the fire hazard in standing redwoods.

This subject might be elaborated very considerably; but with the prior legislative recognition that there has been of the need of fire in logging redwood, and the lack of risk that follows the use of fire in that connection, I do not think it would be proper to take up the time of this body by further elaboration. I hold myself at all times ready to supply you with all the information that lies in my power.

MR. JOHNSON. I understood from Mr. Glavis that the Commission is going to visit the redwood belt before coming to any decision on the kind of law they are going to recommend.

THE CHAIRMAN. I wasn't at the meeting yesterday. Was there any discussion of that yesterday?

MR. BAUMGARTNER. No plans have been made to that effect that I know of. The chairman may have something of that kind in his mind which has not been announced to the Commission. We will know about that when he returns.

MR. JOHNSON. We have taken it for granted that the Commission would.

THE CHAIRMAN. I have no doubt it will be done before the question is concluded.

MR. JOHNSON. I think probably what we want more than anything else, we want the Commission to visit the redwood belt. You can see up there. With the exception of Mr. Burnett, and the possible exception of Mr. Standish, we are not good talkers, but we believe if we get you on the ground you will see things in the way we see them, and we want to say, too, that we appreciate that you want to be fair in this matter.

THE CHAIRMAN. Of course, one of the chief difficulties is that the conditions which might apply in the redwood districts would not necessarily apply in many of the other districts of the State where other timber grows, and particularly on watershed cover. A law to be satisfactory in the redwood timber district might not be at all satisfactory—or, loosely drawn or so ineffective on these other watershed covers and other timber districts in the State, as to be practically useless. Unfortunately, or fortunately, our State has so many different commissions with reference to its timber and other resources, that it is very difficult to get a law that will be applicable to both and work no hardship on either and still protect the timber, where it is so necessary to have it protected.

MR. JOHNSON. I do not understand that the law could not take into account the peculiarities of the different sections.

THE CHAIRMAN. I do not understand that it cannot, but I understand that any law put on the statute books would have to be applicable to timber. I do not know whether it could be done so one law could apply in the timber belt, except as provided here, where you may get the Commission to set fires out.

MR. JOHNSON. I know the game laws apply in different parts of the State. Whenever we want legal knowledge in the redwood district we apply to Mr. Burnett.

MR. BURNETT. I used to be a lawyer, but am not now; but I do not think there is any objection to any law that is based on a reasonable and sound basis of classification. Of course, the only warrant from a lawyer's standpoint of this interference, if you like to call it so, is the fire hazard; and that in itself furnishes the very basis of classification which would warrant the exclusion of certain districts from the operation of that law unquestionably, because that underlies the very source of your power in this matter—the fire hazard.

MR. W. I. WILSON (of the Bay Side Lumber Company). You spoke of the question as to whether or not a law could be framed that would make a distinction between pine and redwood. The very law which you propose here proposes to make a distinction based upon whether you are burning pine in your locomotives or whether you are burning oil in your locomotives. I do not see why it could not make a distinction between the timber, for, as the gentleman has plainly shown to those of us who have been in the active operation of logging redwood, the hazard is scarcely anything when it comes to fire in a green forest. The trouble we have when it comes to logging is whether or not we can wait long enough after cutting the trees down until our slashings have become sufficiently dry so that you can get a complete burn. If you set your

fire too soon and not stop to dry your débris, bark, underbrush, and so forth, then you have an excess expense in logging the redwood; and I can see no reason why a law could not lay certain restrictions on certain classes of timber, and other restrictions upon other classes.

MR. BURNETT. I suggest the very familiar way of having fire limits. It is the same idea. For instance, in San Francisco we have a certain area in which a certain class of building can be constructed which is more inflammable than any other. It is the same idea.

MR. MILES STANDISH. At the risk of repetition I would like to call your attention to certain features of redwood. I think first the importance of the amount of timber taken from the redwood forests far exceeds that of any other timber in California. Roughly speaking, I think it is about between six and seven hundred billion feet of lumber manufactured. That is last year. That does not include shingles, or posts, or ties. Now, so far, it has been practically impossible to log redwood without the use of fire. Of course we have a very wet season on the coast in the winter and that narrows the logging season largely to the summer months. The contour of the country is such that the logging has to be done down hill, and the bark and limbs and débris must be gotten out of the way. I think that experience has shown, as I say, that it is practically impossible to carry on operations in the redwoods without the use of fire.

MR. BURNETT. There is one other proposition I would like to suggest. I call your attention to the fact as a practical matter the fire hazard is not regarded in redwood timber as being a matter of any moment. I call your attention to the fact that in mortgages, where money is loaned on redwood lands, there is never any provision for fire patrol, differing thereby from the pine lands of Washington and Oregon.

As bearing on your present law in its application to redwood, there is a provision in the proposed law, I should say the proposed law, not present law—there is a provision in the proposed law of a cent an acre on redwood for patrol purposes and for fire prevention purposes. I am frank to say that we do not pretend to maintain a fire patrol in the redwood forest, and I do not know of any one else in the redwood business who does. We do not look upon it that there is any possibility of there being a fire to hurt ourselves or our neighbors. It would be an outrage to tax us a cent for a fire patrol when there is no necessity for the use of a fire patrol; so your law must take into consideration the fact that redwood is non-inflammable material, substantially speaking.

MR. BAUMGARTNER. I may say, gentlemen, that I am strongly of opinion that a legal distinction can be made, either by classification or by permission, and discretionary powers with the governing parties. The law that has been drawn, that has been referred to by Mr. Wilson, does not express the views of the Commission. In fact, the Commission has not very definite views at this time. We are trying to get a basis for views now. The law that has been drawn is merely a memorandum drawn by the secretary, with possibly some suggestions by the chairman, to form a basis of criticism and discussion and for amendment; it was merely for the matter of this hearing, which will continue for the next few days.

MR. MUIR. I have the honor of being the first president of the Mendocino County Fire and Protective Association. At a meeting held last

week we extended an invitation to Mr. Glavis and to Mr. Homans, and I would like to enlarge that in favor of taking in the entire Commission, to visit Mendocino County and look into the conditions there, to see the work that we propose to do. I think the conditions, perhaps, in Mendocino County are a little bit different from those in some parts of Humboldt County, as we have more tanbark in our redwoods; and we expect to do trailing and fixing on the ridges in those places where, if fire should get out and is likely to do any damage, we could extinguish it at the least expense and have the least damage possible; and this association represents between forty per cent and fifty per cent of the redwood timber in Mendocino County, and we hope to have it extended so it will take in nearly or all of Mendocino County who desire to come in under the arrangement we have. We expect to keep the expense down to a minimum and give all the protection that we consider is required; and if it is possible to exempt the redwood timber belt from your consideration here at this meeting, I think it would be well to do that, and after your visit to the territory if you want to take that feature up to do that. I think for the present it would be just as well to eliminate the consideration of the redwood belt until you see the conditions there. That is my idea about it.

THE CHAIRMAN. You find it advisable and necessary then to have some sort of protection for your redwood belt?

MR. MUIR. In our territory, further west, on the western side, we consider that there is some protection needed there; yes, I do. We would not want fires to break out; we would not want it to get on the ridges where the tanbark was and destroy any tanbark, and we consider there is some danger there; but it is not a very great danger and we feel that we can handle it a great deal better than anybody else; that the individual owners can handle each tract of timber better than anybody else could handle it. That is the way that we feel about it. Conditions are a little different in some sections of the redwood timber from what they are in others; and we must have fire to do our logging. We can't get along without. We can't get along without fire. There is so much material left on the ground after the tree is fallen; the tops, and the bark. You cannot saw redwood timber with the bark on; you must take the bark off.

THE CHAIRMAN. I did not quite understand you when you spoke of eliminating the consideration of the redwood belt from this meeting.

MR. MUIR. I mean from this bill. I do not think this bill is applicable at all—the consideration of this bill at this meeting. I understood that is what you were going to consider. Mr. Johnson, and these gentlemen here have covered the ground very thoroughly, and their statements are clear and plain. Now the bill that has been prepared here I do not think is applicable to the redwood men at all.

THE CHAIRMAN. That is, so far as any law to protect timber is concerned you think it should eliminate the redwood belt?

MR. MUIR. That is, the restrictions you have placed on the different logging. We have some laws now. Those are very good. I do not think there is any objection to the laws we have at the present, and I think they are sufficient so far as I know. Every individual that is logging looks out for his fire protection. Before he burns he sees that everything is protected so there is not going to be any damage done by fire.

THE CHAIRMAN. Do not hesitate to occupy the time. I am sure there are some of you who have other ideas you would like to present. Let us have the advantage of your views.

MR. BAUMGARTNER. I am sure it would be entirely satisfactory for the Commission to have any phase of this subject presented. What I stated about confining ourselves to fire protection to-day—it was with a view to finishing that and not mixing the thing up and going around in a circle. We would be glad to hear from any gentleman on any phase of the forest regulation.

MR. WENDLING. I understood you to say that you would proceed with the hearing of the redwood question. I represent sugar and white pine. Do you want to touch upon that question at this time?

THE CHAIRMAN. I think it would be well to finish up the redwood question, if there is more to be said. There are more men here interested in that subject, and there are things that would be better for themselves and this commission to know and have made public. Mr. Dubois, what do you know about fire in the redwood belt?

MR. DUBOIS. Nothing whatever. The Forest Service has no redwood at all in any of the National forests. The Service has made some studies in there, and published one bulletin some time ago, in which it is said that the fire risk is very light in redwood, especially in the northern part of the redwood belt. As far as our work is concerned we do not touch it.

THE CHAIRMAN. How many men in the room are interested in the redwood timber or redwood belt? Kindly hold up your hands. (A number of those present hold up their hands.) I would like to ask, are there any one of you gentlemen who feel that any law should be enacted at all to provide for protection from fire of the timber in the redwood belt? I mean, should the State enact any law? Do you feel, all of you, that it might be better eliminated from any law?

(No reply is made to this inquiry.)

MR. MILES STANDISH. There are laws at the present time.

THE CHAIRMAN. Yes, I know.

MR. SIMONS. We feel that the present law is very satisfactory in the redwoods. We have lands in Mendocino County, Humboldt and Del Norte counties. We maintain a patrol in Mendocino, but not in the others. We have had some losses in Mendocino County from fire; that is, in our fir and tanoak, but we feel that the present law is satisfactory, and I think the proposed measure—I do not say proposed—but simply something to work on.

THE CHAIRMAN. That is all.

MR. SIMONS. Would be fair for the redwood district.

MR. BURNETT. In summarizing I think I may say that the present conditions are probably fairly satisfactory. So far as the risk is concerned in the redwood forests, certainly in the two northern counties, there isn't any. It would be better that no fire ever did run through there, unquestionably; better for the timber; but it is such a minor matter that it hardly seems at this time, when there is so much to be considered and done, that that should engross the attention of this Commission. On cut-over lands of course we have had fires in Humboldt County, and we have been the greatest sufferers ourselves. I recall one fire we had on cut-over lands. When lands are cut over they grow up

with weeds of all kinds and also sprouts from the redwood stumps. As I have said, that is the manner of reproduction of the redwood—not from seeds, but from sprouts. We do not like those fires, and the one fire that we did have up there injured us far more than it could have injured anybody else. It was a hot fire. It burned trestles, for instance, and some flat cars. The origin of that fire was not due to any logging operation at all, either. It was, as far as could be ascertained, due to the presence of an old fellow who had gone in to cut out what they call redwood burl, fancy redwood.

That was a very disastrous fire to us. I suppose it meant from fifteen to twenty thousand dollars loss. It burnt up one or two other shacks. Now, as to a case such as that, where it is close to any habitation particularly, or close to a small shingle mill, anything like that, where the cut-over lands become a nuisance or in inflammable condition, anything like that, that is now cared for, as I have pointed out, by the amendment made in 1911, which gives to the Forestry Department the power to compel the owner of that to clear it up—declare it a nuisance and compel the owner to clear it up; and if he does not clear it up then the department has the right to do it, and charge it up to him. Looking at it from a practical standpoint, that is the only place where a fire has any connection with redwood forests, and that is cared for, I submit, by the amendment to the law of 1911.

MR. BAUMGARTNER. I think we may safely assume that all of the redwood men would offer no objection to any reasonable regulation which the public interests might demand; and I would like to ask if any of you feel if any such regulation could be made that would not be onerous or seriously damaging to your interests. That is to say, you all feel that the law as it now stands is satisfactory to the lumbering interests, and that it is fairly so to the public interests. Now, you gentlemen perhaps will know, as well as anybody else, whether or not the public interest is fully protected by the law as it now stands; and if it is not could regulation be enacted which would afford the protection—whatever the interests may be—without being seriously harmful or confiscatory of the lumbering interests of the redwood belt?

MR. JOHNSON. I would like to have Mr. Bolden here, who is our forester, state his experience up there in the last two years.

MR. BOLDEN. I am looking after the outside interests of the Union Lumber Company, and particularly their fire protection. In the last three years—our lands are mixed in with probably 150,000 acres, possibly a little more—and in the last three years the fire loss there has been about three thousand dollars. This was caused not from logging operations, but from campers, careless campers—and I might say that the protection work is going on there now, in the field end of it, which is more protection against campers and hunters than it is against operators, because the operators take care of their own burning. They have to protect their camps and engines and things. So far as the logging engines go, their donkeys and like of that, the only danger from fire from those is that the engines might burn up. The fire cannot get away from them. The land is always burned clear around them so that they can do logging; but what fire protection work we are doing is entirely against, I may say, against campers, hunters and the like.

THE CHAIRMAN. How much is it costing you per annum to take care of the patrol or such treatment as you are giving them?

MR. BOLDEN. Our patrol last year cost \$220 to patrol fifty thousand acres. That is what the actual patrol work cost. We are doing some trailing besides that. We have to patrol not to exceed three months. Our dry season is very short. That patrol is more against people camping and fishing and hunting. We have had no fires the last year at all, and a slight one the year before.

MR. BURNETT. I would like to call the Board's attention to the fact that the Government's publication on the redwoods that I spoke about before says: "The only cause of fire in the forests is the carelessness of campers, etc., who leave their camp fires burning," (page 16). That is the condition in the redwoods.

THE CHAIRMAN. Is that Bulletin 38 that you spoke of?

MR. BURNETT. Bulletin 38, page 16.

THE CHAIRMAN. Anything more on the redwood question?

MR. JOHNSON. I just want to say that the redwood people kind of feel that the public in general should stop regulating the redwood people on the fire question and tax the fishermen and hunters. We think we have been hit long enough. They ought to get after some of the people who do the fishing and hunting.

THE CHAIRMAN. Isn't it true if these fires are caused by fishermen and campers and what not, regardless of what the cause is, it shows the necessity of protection of some kind?

MR. JOHNSON. We have laws now that cover that pretty closely if we can catch the offending persons.

THE CHAIRMAN. You think the trouble is more from lack of enforcement of the present law than lack of law?

MR. JOHNSON. Yes, I do. Of course it is difficult to catch those persons if they set fire. The difficulty I think is not in lack of laws but in enforcing the present laws. However, I think as far as Mendocino County is concerned I do not think we have any very great fires there.

MR. WILSON. I think we ought to hear from the pine men.

THE CHAIRMAN. There is no objection if the redwood men have said all they want to say.

MR. BURNETT. I think we have said all we want to say probably as redwood men. We have a whole lot to say, however, in which we would find our interests the same as the other timber men on this bill; but as redwood men I hope we have shown to this Board that this legislation is not suited to us.

THE CHAIRMAN. If there is no objection, go ahead with the discussion of the pine men.

MR. J. WENDLING. I do not want to kick the redwood men's dog around, but it occurs to me that as the redwood men do their logging in what is known as the fog belt near the sea, where they have almost entirely pine and redwood forests, they are practically immune from fire; but as they approach the district where the redwood is intermingled with oak and fir there is some danger of fire. That is natural. So it occurs to me that what would be sauce for us ought to be sauce for the gander, too.

Now, then, I represent the Pacific Coast Sugar White Pine Association. Some time ago we had the pleasure of meeting with Mr. Grays, the secretary of the National Forest Association. We had a meeting

here comprised of the National representatives, some State representatives, and also the lumber interests generally; and it was resolved at that meeting that we should form an association of the lumber people of the State of California, the timber owners, and that work has gone along with a fair degree of progress, I believe. Mr. Standish, who was elected chairman of that meeting at that time, has pushed along the work with great vigor in the effort to get an association formed, and is entitled to much commendation for his excellent endeavor.

We recognize with all people that forests are liable to burn, fires are liable to occur; we recognize that the camper, the hunter, the fisherman, are liable to set fires, not maliciously, but simply forgetting to put the fires out, and leave them as hazards, where a forest might be destroyed by a fire occurring; but I do believe, speaking from my point of view and the companies who are operating in rather a large way, we take good care of the forests of pine. In the last half century there has not been a serious fire in the sugar pine forests. That does not mean to say that we are not liable to have a fire at some time, serious in its nature, and we welcome all help that looks toward the prevention of fire, and we are willing to cooperate—anxious to, in fact,—with the State association and the Federal association; and to the end that we may thoroughly and properly and intelligently cooperate we are forming a fire protection association of our own.

The new measure that has been outlined in its present form, I only read it once. I arrived from the East on Saturday only, and have not had time to give it much consideration, but it is evidently copied exclusively, on account of its language, from the operations of the lumbermen in British Columbia, because it in many instances refers to leases and so forth, which is not the mode of owning title in this country. In Canada the timber is practically all, generally speaking, owned by the government, the entire financial burden is carried by the government. In the United States of America and California, the State of which we are now talking, the timber in private ownership is owned entirely by the persons who have invested their funds in these properties. The Federal Government has its reserves in the State of California in which timber is sold and cut under government regulation. The State of California, if I am correctly informed, does not own any forests at all in California; but is endeavoring to so provide through the medium of law a proper safeguard against fire, and therefore has its Conservation Commission, which is good; but the laws of British Columbia, where the Crown carries the entire financial load, carries absolutely the entire financial hazard, in case of a fire, if one has a lease, and the property is destroyed before the lumberman takes the logs himself, it is the government's loss and not the individual's loss. In California it is the individual's loss or the corporation's loss.

Again, the laws of California should in my judgment be made in a sense analogous to the laws of Oregon and Washington for the good and excellent reason that if the laws of Oregon were made seriously burdensome to the operator he would be at a serious disadvantage as against the operators in Washington and California. If, on the contrary, the laws in Washington were made seriously burdensome to the operators, the operator there might be so seriously disadvantaged as to be practically disqualified from operating, as against the operators in

California and Oregon; and it is likewise, therefore, necessary to prove that if the laws in California were made in a sense seriously burdensome as compared with the laws of Oregon and Washington it would be a sad burden to the operator in California.

As I understand it, the whole plan contemplated is to provide revenue and process by which the properties in California may be safeguarded against fire. That I concede to be the general proposition. And it occurs to me that if the Commission, whose personnel I am not acquainted with personally, are not thoroughly familiar with the forests themselves, that the first and most important of all steps following this one would be to acquaint themselves with the forest conditions of this Sierra Nevada range; and I should be glad to extend an invitation to the entire Commission—and do so now—and all the officers who have a hand in the work, at some time in the summer months that they may appoint, giving us notice, to join with us in a junketing trip through our forest to show them what we are doing, to show what we are already doing, and to acquaint themselves with the whole situation from the business standpoint as well as the possible theoretical standpoint. It occurs to me that when that information is gathered it will take some time to do so, and in order that the association, which is in process of formation, composed of the redwood people and the sugar and the white pine people—you have a meeting called for some day this week?

MR. STANDISH. Thursday.

MR. WENDLING. At what hour?

MR. STANDISH. Two o'clock.

MR. WENDLING. Two o'clock, of the present week, Mr. Standish has called a meeting for the purpose of organization; then we will have a body of lumbermen, timber owners, from which we can intelligently appoint a competent committee to take this work up with the Conservation Committee and thresh out something that will be sound and just to the redwood people and just to the pine people. I am frank to say that the redwood does not carry anything like the hazard that pine does. It carries some, and it occurs to me that this law that is now proposed is so new, we haven't had time to study it, we know therefore little about it, that we should take a period of time during the summer of 1912, of this year, for the purpose of acquainting the State Forester and the State Conservation Commission with our methods; and I think it is a good suggestion for a junket through the redwoods, and then it occurs to me they would have ample information for a basis for really understanding what our difficulties are and what our merits and virtues are, and aid us in curing any defects that may be in our operations at the present time. That occurs to me as good, and therefore I would suggest for your serious consideration that we recommend to the Commission such action, that they visit the forests and become familiar with what we are doing, and that we take some time, say ninety days or such a matter—they are probably busy people, and it will take some time to arrange their affairs to make this trip. I offer that as a suggestion for the serious consideration of the gentlemen of the Commission, that we do not be hasty on a matter so vitally important to the people. It is an easy matter to make mistakes and it is a difficult matter to correct them, particularly once they are laws; and if there is anything upon this question that we ourselves are not informed upon we should seek

that information, gather it, and work in intimate harmony with this Conservation Commission, looking towards the offering to the legislature of a law that has the proper seasoning, not something that will be conceived quickly and hastily put into effect, and probably be seriously objectionable to some of the interests and to the people, too, particularly if done quickly. I rather strongly urge on behalf of the interests that I represent—some thirty-five companies in the Sugar and White Pine Association—that we take time and do this as the result of proper thought and proper consideration, and after our thoughts are properly seasoned, there is plenty of time before the next session of the legislature to season a proper law, either by amendment to the present law or an entirely new law. I thank you for your attention.

THE CHAIRMAN. I have no doubt that the Commission will some time before getting any permanent draft of a bill, go through the timber regions that you speak of, and acquaint themselves as thoroughly as they can with the conditions there. I am heartily in favor of going through that and taking it up with the people on the ground.

MR. WENDLING. Might I also ask you, how does my suggestion strike you that we appoint a committee from the organization to be formed on Thursday to cooperate with the Commission in the offering of such suggestions as practical men may have to offer?

THE CHAIRMAN. I think it would be a practical thing to do.

MR. WENDLING. Is it proper that I should make a motion here at this time?

THE CHAIRMAN. I hardly think that we can consider it. If you did in your own association I think it would be acceptable to this Commission to take it up. We want to get all the information we can, and it seems to me that is a good way to get at it. We understand you people cannot be here all the time taking up these matters in detail.

MR. WENDLING. My object in making that suggestion was this: It has been my experience that when you have a large number of people gathered in a congress the amount of real genuine reform or progress that you make is very much like taking a funnel and pouring a large amount of stuff in it. You can increase the size of the funnel by extending the wings until you can get practically anything you want, but the real result you get out of the small end of the funnel is practically nil unless you boil it down to a committee that are qualified to cooperate with the Commission. Then it occurs to me you would get excellent results from that kind of a committee; and, if it is your desire, I would be very glad to recommend to the meeting on Thursday and to the gentlemen there assembled that we do appoint such a committee.

THE CHAIRMAN. I think it would be a very excellent thing to do. How much timber—this may seem simple to some of you—how much contiguous territory of timber is represented in the redwood belt that we have been speaking of?

MR. JOHNSON. I think, approximately, about a million acres. Mr. Burnett can find it in the report of the State Forester.

MR. WENDLING. Something like fifty billion feet. isn't there? I understand there are about fifty billion feet.

THE CHAIRMAN. What are you going to do in the way of fire protection in the pine districts, Mr. Wendling, for your own protection, your association or organization there?

MR. WENDLING. We haven't a fire association as yet; we are forming one on Thursday; but I think usually our corporations—I may say in that connection that where the operation is of sufficient magnitude to justify the care of the remaining forests, that is, the small growths, for instance, where a company has a large tract of land, of say fifty or seventy-five thousand acres, you find all of those companies watching fires and burning up their slashings and so forth so that the fire hazard is practically nil so far as spreading is concerned. It is watched with proper facilities, and they burn up only the stuff that ought to be burned up. You find all of the large companies taking care of their young and growing timber because it is going to be valuable later and it is of sufficient magnitude to warrant the expense involved. We figure that in the Wendling Company, where we have 35,000 acres, in thirty years from now, with proper care of the forests, the young growths will probably be worth as much money as the present forests that we are harvesting. Our difficulties have always been with the operator who has a small portable sawmill, gets 160 acres, sees a fortune in it that never comes, cuts away the timber, goes broke, leaves the débris, and returns the 160 acres to the State for taxes—it might be a little more—it might be 320 acres—that is the fellow that causes the bother. He must be watched. We will take care of our end of it. We learned how to behave a long time ago. You will have no trouble about us. It is the fellow that goes on the hillside and cuts a small tract, and the State Forester will tell you the same thing.

MR. JOHNSON. There is a statement here by the State Forester that there are one million two hundred and fifty thousand acres of State red-wood forests.

THE CHAIRMAN. What have we more on the pine forest situation? What have you to say on that, Mr. DuBois?

MR. DUBOIS. It strikes me that my interest in this is somewhat different from the lumbermen represented here. My views are the views of the United States Forest Service that I represent, and are perfectly known. We are not in the business of logging timber, but protecting from fire the young growth. In some cases, as Mr. Wendling says, the pine operators are protecting the young growths when they can see that it is financially to their benefit. It would be poor policy if they did otherwise. With us we have been given a very definite trust and have gone in on a pretty wholesale scale. We are in charge of twenty-eight million acres in the State, and are spending in the neighborhood of two cents per acre per year on an average for protection work. We figure that the standing stuff is worth somewhere around two hundred and fifty million dollars. Two hundred thousand dollars a year spent in the protection of the standing timber, and at the same time insuring the protection of the young timber, we consider that a good long term investment which the Government can afford to undertake.

As far as the discussion has gone this morning, it seems to be questionable whether there is or is not a fire risk. It does not seem to be determined from the practical operator's point of view. Regarding the future value of the forests very few companies agree.

THE CHAIRMAN. Are you having many fires in the pine district, Mr. Wendling?

MR. WENDLING. No, sir.

THE CHAIRMAN. What is the area you are speaking of, that you call the pine district?

MR. WENDLING. The pine district in California extends up through Oregon and as far south as San Bernardino County. They had a serious fire in the San Bernardino Mountains last summer. It is my observation that all properties are subject to fire, whether it is a steel building or otherwise.

THE CHAIRMAN. I was referring more particularly to the thirty-five companies you speak of. Are you having fires up there to amount to anything?

MR. WENDLING. No. We take good care of the forest and watch it for fire. We have not had a loss of a dollar in 1910 and 1911. I may also say in regard to the operator that cuts out a small place, takes whatever profit there may be, and deserts the property—which has been so common throughout the country. The profits on the business, the way they operate, are not sufficient to burn up the débris and exist. Nor would it be practicable for them to endeavor to reforest a small acreage which takes half a century or two hundred years to get one crop. That is a matter for the Government or companies with very large holdings. We feel that our properties, to which we are always adding, that we will be able to go on just so long as there are forests in California; and we feel that our corporation is practically perpetual in that, as we have a way in the forest to go through it, by the time the first forest is cut away there will be another forest by the proper care we are giving it. Now, the small operator cannot do that. It would not be sensible. If he tried to he would be foolish, and, in fact, if he was thoroughly posted he would not go in and engage in a small operation, as a small operation is unprofitable and he is up against larger and better-financed operators, and usually perishes. We feel, and figure, that our property will be worthy of reincorporation under the laws, from time to time, from half century to half century, perpetually, so long as there are any forests in California, by proper care.

THE CHAIRMAN. Mr. Wendling, what is the practice of setting ground fires to get rid of the forest cover, the débris that is lying on the ground in the forest?

MR. WENDLING. We haven't gone into that in a practical way. We think that the fire in the forest with proper care is a good thing, and we go so far as to fall dead trees that are not useful for lumbering and burn them up with care, and use fire where we can to destroy waste, and to prevent its accumulation. Our observation generally is that the forest waste keeps rotting almost as fast as it accumulates.

THE CHAIRMAN. It rots without burning up?

MR. WENDLING. Yes, except in places where it does not get enough moisture. On a small knoll, where it gets no moisture, it ought to be destroyed. But there is another feature of our operation that may not occur to you. The bough of the sugar and white pine is a sappy bough; it does not burn readily. The bough of the fir in Oregon and Washington is very resinous. Such is not the case with the white pine forest in the Sierra Nevada range. With us the proper care of our own forest, such attention as we are giving it, we consider it entirely adequate for our own needs. We are afraid there always of the fires that come from the small foothill operator with the portable sawmill, who, if he has

title to property, will cut the timber away, or he will probably fall it for trees for shakes, cut about sixteen or thirty-two feet, and leave it to rot, and go away, leaving the débris about, and that is inflammable and dangerous. There is no question about it. The little fellow, therefore, who operates with the saw and the hatchet and the flume, he is the fellow that litters up the forest, and he is undoubtedly dangerous. Now, we are not in a position as lumbermen to deal with that fellow at all. You take the State or Federal law and the patrol makes him burn up his slashings and trash. But in our case, where he is our neighbor, and has 160 acres, or is right in our property, he will litter up a little patch of country and go away and leave it; and we have no power or legal machinery by which he can be reached and compelled to do the right thing; and we are very glad to have the State of California join with us in trying to make the other fellow as good as we are trying to be. That may seem an attempt to display my virtues here, but if you will look I think you will find it is correct.

MR. JOHNSON. Mr. Burnett, would this present law do away with a nuisance of that kind?

MR. WENDLING. Mr. Burnett suggests that the present law enables the State to reach that kind of a man. I am conversant with the fact that there is a provision in the law, but the lack of appropriations under that law for the proper enforcement of its provisions, in my opinion, constitutes its lameness; therefore, it is not enforced as it should be enforced. Am I right, Mr. Burnett?

MR. BURNETT. That is correct. That is the law of 1911, which gives to the State Forester the right to compel the owner of land to so clear it up as not to make a nuisance any longer, and in default of which the State Forester might do that himself, and the expense falling due would be a lien on the land. Now, it might be it would be a very worthless lien, as somebody has suggested, because if the small operator is going to let the ownership of that property lapse and go back to the State for taxes, obviously that lien does not afford the State any protection in getting back the expense incurred in cleaning the land up; so it comes back, as Mr. Wendling suggests, to the fact that there is not the necessary appropriation to carry into effect the provisions of that act. That ought to be strengthened.

THE CHAIRMAN. How would you suggest it be done—State expense, whether they got the money back or not?

MR. WENDLING. I was at a meeting some time ago of the Conservation Committee of the Commonwealth Club, of which I am a member; and I suggested that we recommend to the meeting of the Commonwealth Club that the law be so amended that instead of the State being compelled to sell at the request of some one filing the proper request, the land that has gone back to the State as denuded forest and deserted by the small operator, that the State should have the privilege under the law of holding that permanently, that kind of property, and all that she now has unsold, if the present law were so amended that the State would permanently acquire that and through that medium acquire a forest of her own, belong to the people of the State of California, I think the State would have a great mission in conservation instead of the somewhat nebulous and hazy one of trying to conserve something that she does not own, except so far as it is a good thing to protect

generally the property of the public. I offered that as a suggestion and I understand it was incorporated into the recommendations to be made by that club. If the State of California were to acquire and to hold what she does acquire through the medium of taxes not being made on the property, the denuded lands, she would in time acquire a forest; but she is compelled after five years' time, upon the application of any citizen, to have that property offered for sale, and it must be sold to the highest bidder, therefore the choicest part of the State's property finds its way into the citizens' ownership, the rather undesirable property remaining the property of the State and yields no taxes. If the State of California, therefore, during the next half century, acquired these denuded lands that are left with the débris upon them, or compel the parties to burn it up as they make it from time to time, we would have really something for the State to conserve in the way of a State forest. As I understand it at this time, the State does not own any forest at all. Therefore the State is endeavoring to provide laws, and means, and measures, and finances for the purpose of inducing or compelling the citizen to dispose of his waste to the end that it may not be a menace to the adjoining forest that the State does not own. It is rather an interesting situation in a sense and it seems to me that the State would be in a better position to enact and carry out properly the measures of conservation if she has something of her own to conserve; and when our organization is completed, we intend to make some recommendation of that kind for serious consideration, that the property falling to the State may remain in the State.

THE CHAIRMAN. Do you not think that there would be serious objection to the State holding such lands, on the ground of being locked up and kept away from the public, from the citizens, holding lands that the citizens need?

MR. WENDLING. That is a political question. Many entertain the idea that the Federal Government should not hold any property that the citizens want. Some gentlemen entertain that idea. Some think that the Federal arm should be sufficiently strong to retain all of the properties not at present in private ownership. Those are questions that I do not care to discuss at this time, but it seems to me the State would be stronger in conserving something that she owned than something that the citizens owned.

MR. JOHNSON. I do not know whether any of you have talked to Mr. McAllaster, the manager of the Southern Pacific Land Department. I saw the gentleman the other day and had a long talk with him, and he had a new idea. He seemed to think it was very meritorious, and I think so, too, in the way of legislation. I do not know whether I ought to give it away and say anything about that, because he is to read a paper on it and it may be that I will be stealing some of his thunder; but I would like very much at the same time—I don't know, perhaps somebody has given it this morning before I came—I will give you a little brief outline. His idea was that there should be a law, dividing first the forests of the State up into small districts, in such a way—for instance, you take a small area whether it was timbered land or not—but if it had timber land on it, and there was a fire hazard, to begin and have the State district the whole State up into these divisions, and then have one man at the head of those divisions. Then, in a general way,

it would work out that these various divisions and the State officers would have something to work from; that is, they would have their different districts, and each district take care of itself; the expense of each of these districts would be divided up, and taxed against the land, all of it, whether it was timber land, farm land, or whatever it was. If there happened to be a little town in there, that town should stand a tax to protect this district from the fire, and so on. He had some ideas about insisting that wherever there was a telephone line, whether it was a private one or otherwise, running through the property, that the State could insist upon it being used for fire purposes; and altogether it started in with a general idea of dividing the State up into districts, providing an organization for each district, and providing a maintenance for keeping those districts up by taxing all the property, and not only timber property, because all of the property is benefited by the protection from fire. I think it a very good idea, and it gives a chance to work out a whole lot of other things, and greatly help the system of protection from fire. I suggested that would be fine and protect the timber from fire during the dry season. They could go that one better, and let this same organization go ahead and do a little light burning and various other things that would help the forests just as much as if they kept the fire out. He seems to think that could be added to it later on, but the principal thing was to get the foundation in the beginning, and I think it is a very meritorious idea. In that way everybody has to come in, the small owner and the larger owner, and everybody that was being protected; and if keeping the fire out did any good, they had to pay some of the expense. I would like if, some time during the meeting—I don't know whether Mr. McAllaster is going to read it, but I think it is a very good paper and ought to be read, and I think Mr. Glavis might extend him an invitation to read it; he has got it all prepared because I read it, and I think it would be of some benefit and bear on this subject. He seems to be very backward in wanting to spring it, but it is too good a paper to lose.

THE CHAIRMAN. Do I understand that property inside the district, whether timberland or not, would be taxed?

MR. JOHNSON. Everything.

THE CHAIRMAN. Do you think that could be done constitutionally?

MR. JOHNSON. Why not?

THE CHAIRMAN. I do not mean to argue it with you, but suppose there were agricultural lands inside the district, how would the owner of that get any benefit from protection from fire?

MR. JOHNSON. If there is timber land all around, and the man had a little clearing and a home and house and barn, naturally he would get more benefit than anybody else; of course he would not want the forest fire around there to burn him out, and if he is in the district he ought to pay for the protection he is getting.

THE CHAIRMAN. Just a little clearing in the timber?

MR. JOHNSON. You would not go down into the San Joaquin or the Sacramento Valley and take any of those lands in the valley, but just in the timber-land area. After you get up in that small growth and get into the timber-land area, wherever fire would do any damage, and then divide those districts off, and everybody pays alike, according to the tax that was put on him, and everybody would be interested in it.

THE CHAIRMAN. Something after the same manner that we have formed water districts?

MR. JOHNSON. Yes. I think his scheme was that the State make the first appropriation for the dividing of these districts, and then after they were divided off and the arrangement was started, each district would keep itself up. Then, you see, it would revert itself into control in each particular district, and if you happen to be in a particular district with your timber you would naturally take a good deal of interest in it.

MR. BAUMGARTNER. We have a state law under which protection districts of various kinds have been organized. Why is not that adequate for the purpose you have outlined?

MR. JOHNSON. You haven't got any way to keep those things up. You have some timber laws here, but you haven't any way of enforcing them.

MR. BAUMGARTNER. I am not speaking of timber land laws, but a law which enables any district to organize for any purpose for public good.

MR. JOHNSON. The trouble with that is you leave it optional with the district to organize. This would be a state law and the State would take those forest people and make those districts; it would not be optional; they would be made, and the State would appropriate enough money to make the districts and start them. Then all the districts would have to do, according to the law, would be to maintain them. That would bring it right down to where they look after their own property under a central organization. I don't say that is right. I just suggested that as a possible remedy for this forest fire.

MR. WENDLING. We have Mr. Walker with us, who represents important timber interests in California. We would like to hear from Mr. Walker.

MR. CLINTON L. WALKER (representing Thomas B. Walker, *et al.*). I am not prepared to speak at all, and haven't anything special to offer, excepting my viewpoint. I have been in the timber districts of Siskiyou, Modoc, Shasta, Lassen, and Plumas counties for about fourteen years. During that time there has not been what you might call a destructive fire. There have been fires each year in different places doing some damage, but we have never had fires such as you read about occurring in other parts of the country.

Our company has taken a little different view of the fire situation than has the Forest Service. We have been criticised quite energetically at times for our attitude in the matter. We have assumed that the fires were coming each year, and that our holdings were so large, so scattered, so inaccessible in a way, that we could not keep the fires out, and we have assumed the fires as a condition, and we have sought to meet it. We have, for the past, I think six or seven years, had crews of men in the wood preparing the forests for the fires that would come, assuming that the fires would come and that we could not keep them out; and we have worked over probably I should say, as a rough estimate, probably one hundred or one hundred and fifty thousand acres, that we have prepared for the fires. The first four years that we worked I advocated to our company that we follow it up with a systematic burning after we had prepared it for the fire—to burn it over

in the fall of the year at the proper season, rather than to wait until the dry part of some dry season, when the fire might run beyond our control. The past two years we have followed up our work with a systematic light burning. The first year we began a little too late—it was a little too damp; we only burnt over about three thousand acres—it was a kind of laboratory test; we were apprehensive that the fire might get beyond our control. The last year we started in a little earlier, but the fall rains came on unusually early in our particular section and we did not make so much headway, but we made headway enough to satisfy us that it was entirely a practical scheme; that we could eventually work over our entire holdings, but they were quite large and it would take a good many years, but after we had got the country once worked over—and I might say that by working over I mean we have merely filled up the cavities in the hollow trees; we have tried to cut out the small, you might call them Christmas, trees, to use a common expression, the smaller trees, but there are so many of them, and the expense ran up so high that we had to quit it; but even when they were cut out they were more bother than when standing. We could not dispose of them. We could not burn them green, so we had to cut them and pile them and leave them for two years before we could dispose of them. We find that is quite a benefit, and it does not hurt the standing timber, the mature timber, any appreciable amount. I went all over the burned area very carefully, and I found no place where there was any material damage. Occasionally there was a place where the fire got into one of those hollow-butted trees and did some damage, but it was so small it was practically nothing. The only objection to it has been the damage to the reproduction. That has been dwelt on quite extensively by the Forest Service. I think they have rather exaggerated the damage that has been done. There are a great many things I think in favor of light burning and not very many things against it. In the first place it is cheap. It don't cost a great deal. Last year our expense ran about thirty cents an acre for the preparatory work and the subsequent burning. I think it is a complete protection to the timber throughout our territory from fire, and I think it will be of great benefit later in reducing the expense of logging, and I think there will be enough reproduction left to answer all conditions. I do not see the necessity of maintaining so vast an amount of reproduction on the ground when there are only perhaps three or four trees to the acre that can possibly mature.

Then there is the question of—I believe the Forestry Department calls it the beetle pest—throughout all our country more or less damage is done by the beetles, I think they call them, worms and bugs of various sorts. We have been apprehensive that a system of total protection from fire allowed the beetle pest to become a great deal worse. I believe it has done considerable damage in the totally protected areas of Oregon and Washington, but I am not personally familiar with that. It is only hearsay. I do not know that there is anything that I can speak of further.

Question: Does this burning tend to kill off the young growth and prevent reforestation?

MR. WALKER. It has killed off to some extent reproduction, but in most cases it has been confined to white fir. White fir grows in dense

stands—very dense stands, almost like grain, and when a fire comes I believe it does some damage; but the pine stands in more isolated groups, and it has not been damaged to any very great extent. In trees more than an inch or so in diameter the damage has been very, very small. The damage has been confined to little bits of trees that stand in the brush, and where the débris was so thick that there was very little show for them to mature anyhow. If a forest fire got in in the dry season that would be sure to go; but the damage was very, very slight, nothing to cause any loss at all. We have found the system quite practicable. The Forest Service had the work inspected; in fact, Mr. Rogers of the Plumas Reserve, and one or two of his rangers, were there to inspect it, and they made a report, but I never saw the report; I don't know what they reported; but Mr. Rogers told me at the time that there was practically no damage being done to anything excepting the very small trees. And I notice in the protected area of our country, where it has been protected for particular reasons—some places around a small town, some places where there have been a rail fence and a small building—things that have caused the people to protect the area, when the fires get in there they do considerable damage. The only fires I have known of in the country that have ever done any material damage have been areas that have been protected for a great many years. There was a little fire on a section down on Prattville about four years ago, a comparatively small fire. The fires had been kept out of there quite a number of years by reason of rail fences and small buildings, and being close to town, and it was burned during quite a dry year, and it was the only hard fire I have ever known in that country. It burned very hard, and almost all the people in the country got out to fight it, and they could not do anything, could not stop it.

I believe that by working the country over, as we have done, and burning it over carefully at the proper season of the year, the fire risk throughout our pine area would be entirely eliminated, but there is not enough left on the ground after we get through a fall burning to support a fire hard enough to do any material damage; and after we have worked the country and burned it over once, we propose to follow it up, and in the course of four or five years, perhaps longer, complete different areas with another burning, and we hope to get it burned out in such a way that there never will be any risk of fire.

THE CHAIRMAN. This afternoon Mr. Hoxie will be here, and have a paper on forest fire protection or elimination; and Mr. McAllaster, the gentleman you have spoken of, is also invited. I hope they will be here at two o'clock.

If there is no objection we will stand adjourned until two o'clock this afternoon.

AFTERNOON SESSION.

The Conservation Commission met in the afternoon at two o'clock pursuant to the adjournment, Honorable Geo. C. Pardee being in the chair, and the following proceedings were had:

MR. GEORGE L. HOXIE (of Cottonwood, Shasta County, California). In the first place I will outline my position briefly. It is that of an absolutely independent advocate of the use of fire in the forests. I am not here representing any set of men or any corporation whatsoever, and my troubles began in this work by having responded to a request to give my ideas about—to give my long experience in the timber and my observation of what the results were of fire hazard in the timber, more particularly on account of some bonding conditions that were proposed, and it was the bonding people that wanted these ideas, as I understand it. That is simply an understanding—I do not know it to be a fact—but I have observed these conditions for a great many years, and the illustrations that are in this article were taken by myself, some of them ten or twelve years ago. They represent each phase of the forestry conditions as I understand them. For instance, there is one that shows the tree on the ground caused by fire entirely; but if you will observe, the tree is intact, the bark is not even burned. That is a condition that is brought about, not from any waste of the tree itself, but from débris floating down the hill and hitting against it. Possibly a windfall started the trouble, burning through the bark, and sap and pitch commencing to ooze, and the fire burning the pitch, and finally the tree is down as though cut with an ax. All these conditions, the forestry damage, is on the uphill side. It is so seldom that it is on the other side that it is hardly worth noticing. I wanted to support my position more by the observation of others on these lines. For instance, here is a letter that I received from an old mountaineer who lived right in the forest and so lived all his life. We would make our headquarters in going into this particular district of timber at his home, and like all these mountaineers he was very hospitable. There was a fire happened in that particular locality and he knew that I was interested, and my associates were, in the timber there; and this is a letter that he wrote to me on September 18, 1901. It reads thus:

"MR. HOXIE. SIR: I write to you to let you know this country is on fire. The mountains south of my place is on fire and one at the copper mine on Little Bear Wallow. It has done no harm to your timber yet, though it may do harm. I cannot tell. Yours truly,
W. H. FRIEND."

Following that letter, on November 1, 1901, he has written me an explanation of the conditions as they existed subsequent to the fire:

DEAR SIR: Yours of October 9, at hand, which I found waiting me on my return from Humboldt, and I will try to answer to the best of my ability. You wish to know the extent of damage done by the fire. The damage is very light. I have rode over the burned district. I find the fire was confined to the underbrush and old logs. I found no green timber burned at all. As to the origin, it was caused by electric storm we had in August. It burned mostly around Big Bear Wallow, west of the cabin, which is north of Little Bear Wallow, running up to the top of the divide east."

I refer to that letter for the reason that is a fire that happened not by the act of man, but perhaps the weather clerk had something to do with it; and it went through timber that myself and associates owned;

and if I wanted to show any of you real good timber, that is where I would take you, right where the fire has been through for at least a half dozen times in the last twelve years, but you will find, I think, if you would gather together in convention cruisers of timber, men who lived in the timber, men who have studied conditions of the timber, you will find universally they will give testimony that they believe that fire is the salvation and the preservation of the timber. Of course I do not believe, and I do not advocate fire during the hot months, July and August, but I would advocate the preparing of the land to receive the fire during those months, and I would do my burning later on, say in October, and November, and December, according to the conditions of the particular year. Of course, expense arises, and Mr. Walker, I think, gave in his statement this morning—said that the expense, as far as their work had gone, had been something like thirty cents per acre, for this particular work we are talking about.

MR. CUTTLE. That is per acre, the first burning, which of course would be naturally in excess of subsequent burnings, because there is an accumulation of many more years. That was the maximum expense then.

MR. HOXIE. Yes, the maximum.

I have in my hand a California Water and Forest Association pamphlet, which was published in 1903. On page 37 there are the observations of others along these lines. It is headed, "Preserving the Forest by Fire, by Marsden Manson." The article says:

"Scientists say that in order to preserve the forests from fire pine needles shall be allowed to accumulate, that dead brush shall not be burned out, that fallen trees shall not be disturbed. The practical mountaineer says, 'Burn; and burn over, in order that this accumulation of dead matter shall not become so great as to cause the destruction of the trees when a fire sweeps through the mountains.'

"There is but one practical way of preserving the forests of the Sierra from being destroyed by fire. The remedy may appear upon its face to be severe, but nevertheless it is the only one, and it is by the use of fire. If the soldiers, under proper instruction, would set fire to the dead matter each year, there would be absolutely no danger of the destruction of the forests by fire, for the reason that I have already stated. This was the practice of the Indians in former days, and until the soldiers came fires were of sufficient frequency to keep the dead matter destroyed, and there were no signs in the mountains of such fires save the occasional scorching of the outer bark of the large trees. Now it is an easy matter to find where recent fires have completely destroyed the forests over large tracts of ground. The remedy which I would suggest, then, is that these accumulations of dead matter be burned by the soldiers or others working under the supervision of persons familiar with such work. The expense attendant upon this would be a trifle compared with the vast loss which will certainly accrue if the present condition of things continues.—H. J. Ostrander, in *San Francisco Call*, September 23, 1902."

"In some quarters this method has been sneered at as 'the Digger Indian plan.' But despite sneers, it is the plan followed by the scientific foresters of Continental Europe, who keep the forest floor clean and clear of accumulations of dead limbs and duff.

"This system was described and advocated by Joaquin Miller in a paper solicited by and read to the annual meeting of the American Forestry Congress some years ago, and it commends itself to all observers of nature who understand the necessity for following her laws and preserving her equilibrium.

"Proper use of fire is entirely consistent with the growth of young trees, which under the Indian system were preserved in such quantities as to continually renew the forest and protect its permanency. It should be sufficient compliment to this natural method that the Indians lived in, preserved, made permanent and transmitted to us on this continent the most extensive, valuable and useful forests in the world. Under our management these fine forests have rapidly decreased and disappeared,

and the effect is already seen in the decreased moisture of the earth's crust and increasing aridity of the climate.—*Editorial in Call, September 23d.*"

That is rather to the point—that is to my point.

There are illustrations in a few magazines that I would like to call attention to. One of them is in the *Technical World* of October, 1910. I simply want to call attention to the illustration, as it is one that would be just suited to my own ideas in forestry. I would not let those fellows put that fire out if I were around there close about. I think it is doing much good. It is rather peculiar though in another magazine, also in October, that the same picture appears, though written up by a different author. The conditions there illustrated are that it could not do any harm at all. It is simply burning under and through mature timber. Now, I don't know as I can add much to what I have already said. I would not want to punish you by going through this article of mine because it is several pages long and it is in the August *Sunset* of 1910, and I think a great many who are interested on this subject have read it. I will call your attention to two illustrations, one on page 146 and the other 147. The one on page 147 is an ideal condition. That fire could not in any manner do any harm; and there is evidence there that fire has been through there many times, as will be seen by the scar on the tree in the foreground. The other picture is one illustrating where fire should be used, a light fire to clean up the ground.

MR. PARDEE. Have you touched on the question of seedlings?

MR. HOXIE. Yes.

MR. PARDEE. What is your conclusion, that the seedlings are not killed by the surface fire?

MR. HOXIE. I would say not under proper control. In this preliminary work I would build some sort of a guard around my acreage of young growth until that was, perchance, thinned out or put in condition so that the light fire could run through it without destroying it.

MR. PARDEE. How about out in the body of the forest?

MR. HOXIE. There the young growth is a dormant growth, which, growing under great disadvantages, has not the light or the heat—growing in the shade, and the little bits of spindling trees there are many years old, and it is practically a dormant growth; and any considerable fire, no matter to what extent done to it, would not accomplish very much harm.

MR. PARDEE. But would kill it?

MR. HOXIE. Not necessarily so. It would kill the very small stuff. It would no doubt kill some; but it is a growth that would be of no value until the parent tree was taken away and the conditions made right. You can observe the growth in these mature forests. A small tree, perhaps, has grown two or three inches maybe in a season, while that out in better conditions has grown one to two feet. Those things are brought to one's attention who is studying those conditions. Of course, in this article I have suggested the idea, as the forestry people rather believe in, that of leaving mature trees, that is, cutting the ripe timber at the top to deaden the conditions of damage; and I have debated a good deal as to whether that is just right or not. I sometimes think it is better to cut clean, and following the cutting burn the cut-over area, and prepare it for the best conditions for the new growth. I have seen that adverted to by others. The reseedling, I am inclined to believe, is

done to a great extent by the seed many years having remained in the ground awaiting the proper conditions for its springing forth.

Now, here is a reference of Mr. Deerey, manager of the Potlatch Lumber Company. He said, "From the standpoint of reforesting in the pine belt we find that when the ground is burnt clean we get a nice growth of young pine from the seed already in the ground. When we cut off clean the timber, burning as we go, and leave nothing but poor seedlings, we get a poorer growth of young timber, for the reason that the fire has not sufficiently cleared the ground of débris to permit the better species of seed to come in contact with the earth, and essential to secure germination."

MR. PARDEE. Might I ask what sort of pine that is, Mr. Hoxie? Is that in Idaho?

MR. HOXIE. Yes.

MR. PARDEE. What sort of pine is there?

MR. HOXIE. White pine. Here is a further reference: "Experience proves that where a good, clean burn has taken place we now find trees from three to ten years of age, thus making an excellent basis for reforestration"—

MR. CUTTLE. And not so where it has not been burned over?

MR. HOXIE. I think he continues further: "The poorer species will thrive and grow without coming into direct contact with the earth, and hence the necessity for a clean burn. I would not like a law passed that would compel compulsory burning of logging slashings. I think this should be left to the judgment of the logger."

There are other advocates of not burning slashings in here. There are a great many references in this book on these same lines, but unless there is some particular subject—

MR. PARDEE (interrupting). That subject seems to be the subject-matter of more dispute or more incrimination than anything I know of—the question of burning. If you could file with the Commission a lot of this—

MR. HOXIE (interrupting). I would be glad to prepare a paper with these references, and not take your time on a broken—

MR. PARDEE. I wish you would do that, Mr. Hoxie.

MR. ———. Mr. Deerey spends a great deal every year in forest protection.

MR. HOXIE. I would not obligate any one with patrolling the lands, but I think they should burn it up by a systematic burning, the same as I believe that the Forestry Department should do just those things. There is one subject, of course, that enters into the position between the Forestry Department and the lands they have under their supervision, and the lands of private owners. You take lands that private owners acquired twenty-five years ago and paid as little as five dollars an acre for, with the interest not to exceed seven per cent, they would have reached a value of about thirty dollars an acre; and the fixed charges keep increasing and taxes also increasing; so there is not much encouragement for the private owner to do practical forestry as there would be for the Government.

But, in brief, I am in accord with Mr. Walker's observation. I have practiced forestry on those lines as much as ten years ago, and could show any one who would go through the timber with me just what the

results were. It wasn't any considerable acreage, but it was enough to demonstrate the plan.

MR. CUTTLE. Did you keep any record of the cost of such work when you were doing it?

MR. HOXIE. No, I did not at that time.

MR. CUTTLE. Did you estimate it?

MR. HOXIE. I just took it up on my own hook, and I think we covered at that time about eighty acres; but it was in a very choice piece of timber, and I wanted to remove as much of the haphazard as possible, and I just did it for my own satisfaction. But it is rather discouraging to follow forestry on these lines when your holdings are intermingled with those of the Government, where their policies are so much at variance with those we are talking about.

MR. CUTTLE. How often do you think it would have to be burnt over to be protected in that way?

MR. HOXIE. I think periods of three or four years would be often enough when once burnt and cleared up.

MR. CUTTLE. You think that the droppings would be so small there would be no danger of a fire in the heat of summer?

MR. HOXIE. No, I don't think so. Timber is wonderfully fire-resisting. Of course, it was made so by nature; and I think I have an illustration of that here to show. Now, there is a tree which is a Douglas fir. I guess it is five feet in diameter. It is burnt off, lying on the ground, as you all see. That tree near to you has a length of, well, it would be about an eight-log tree, sixteen-foot logs; and there isn't five feet of it that is damaged by fire, yet it lies on the ground. That was done by something foreign to itself. It was on a side hill and the drifting limbs, and perchance a windfall lying against it, brought about that condition. Had somebody taken that hazard away from that tree before it fell it would have stood there for years and years; but that was fire running at will, which I am not advocating, although I will frankly say that I would rather have fire run through our timber at will than not to have it at all.

MR. CUTTLE. If you have the reference, when you are preparing the paper, I wish you would give us the place where you will find a better stand of reforestation on ground that has been entirely burned over than on ground that has not been burned over. I think you said you had some such instance, or a few of them.

MR. HOXIE. Yes, I can give you those. There is a forest reserve that I do not think the fire harmed very much, even from the rangers' standpoint. There must be quite a heavy cactus and growth there.

I do not want to be here advocating other than the conservation of timber and the preservation of it. I am fully in accord with those ideas, but I think the only way to bring about those conditions is by the systematic use of forest fire. I think the putting out of fire should be under some head, but I think it should be just as necessary to burn the forests at the proper time of the year under the proper supervision as it is to keep the fire out of them and patrol them during the summer months.

MR. PARDEE. What is your opinion as to who should boss that job; whether it should be left to the individual or some governmental authority?

MR. HOXIE. Of course the governmental authority is the one that has

the main interest. Of course they have their telephone systems, and are prepared to do the work, and just offhand I should say the natural tendency would be for them to continue in the job.

MR. PARDEE. Should it be compulsory on the private owner to submit to that, in your judgment?

MR. HOXIE. I think so.

MR. PARDEE. At whose expense should it be done?

MR. HOXIE. I think at the private owner's own expense. I would gladly advocate submitting to conditions of that kind, so far as our property is concerned.

MR. CUTTLE. But who would be responsible for it if the timber was burned up?

MR. HOXIE. Well, of course, if those that we are considering—if the head would follow on what would appear to be right lines, that is, putting the fire in the timber in the fall months when the atmosphere was heavy and the conditions were right, I think the timber owner would stand those chances.

MR. PARDEE. The same as he does in the city when the fire department does not put his fire out that he helps keep up?

MR. CUTTLE. But you must not forget that the fire department doesn't start the fire.

MR. HOXIE. When I make this statement that I do not fear fire running at will through timber land, I would certainly not fear the control by anybody who was supposed to know something about what he was doing, and that is my position.

MR. CUTTLE. Would there not be danger of a ground fire?

MR. HOXIE. None whatsoever. From my observation in twenty-five years in Fresno County and Madera County and the northern counties, I have never seen as much as eighty acres in one body destroyed by fire. Of course you will find fire damages. You will find them more so in the northern part of the State on heavy fir slopes than you will on the mesas or comparatively level lands. A fire starting in a canyon, and the conditions being right, it will naturally create a draft, and it will go up a slope very rapidly, and I have seen fir conditions where there was considerable damage by fire; but I have yet to see the sugar pine and the white pine damaged to any considerable extent, and I think my observations have extended at least over a good big territory.

MR. CUTTLE. You think then that the cleaning up of the ground of debris should only be practiced on practically level land, or on slopes under proper supervision?

MR. HOXIE. On slopes as well, under proper supervision, but I would advocate the setting of fires on the ridges and let them burn down. There is an illustration in this book of one—

MR. BAUMGARTNER (interrupting). What you say does not take into consideration the effect of the watershed at all, but is merely a matter of timber?

MR. HOXIE. Yes, it does.

MR. BAUMGARTNER. I asked it as a question. I did not mean to make it as a statement.

MR. HOXIE. Yes, I include that feature as to the preservation of the watershed. Now, for instance, through the timber you will find different growths. This tar clover is very prolific in the Fresno mountains,

and Madera, and in that district. It grows about a foot high. Then you will find in other districts where the prevailing growth is white thorn, and you will find different grasses and lupin, and you will find what we call squaw carpet. It is a dense creeping vine that gets about three or four inches thick. In these light fires that does not burn. Naturally, the carpet would be damaged under a log that was burning, but generally speaking the damage would be very light. I do not think there is a forest in the State that has a better covering or carpet or watershed condition than these forests in Trinity County, and fires have run through there for years and years without any control whatsoever.

MR. BAUMGARTNER. It is generally conceded, is it not, that fire is very damaging to watersheds in the San Bernardino Mountains?

MR. CUTTLE. Yes, it is considered very bad.

MR. BAUMGARTNER. There is no such brush in those mountains?

MR. CUTTLE. No.

MR. HOXIE. There was a picture here that was in one of those magazines, but it was a little larger and better picture than the one I have here. Some of you gentlemen were not in here, perhaps. This illustration on page 147 of the article of mine that appeared in the *Sunset* of August, 1910, is given as a condition where there would be absolutely no danger of fire, but there was a better illustration that I cannot locate.

I would gladly prepare the paper suggested by Mr. Pardee. I have no axes to grind in this matter. I am not paid by any man, set of men, or corporations.

MR. PARDEE. You would be just as welcome here if you were.

MR. CUTTLE. You are in the same fix we are.

MR. HOXIE. We own twenty-odd thousand acres of timber in Trinity County; and naturally I would like to see it preserved. There is so much data here—

MR. PARDEE (interrupting). Would you mind putting in your paper some of those figures? We may have use for them.

MR. HOXIE. I would be glad to. I did not look for the best. I looked for the worst features, because those are the ones we have got to combat. There is an illustration of some of the timber that stands in maturer state.

There were some of the redwood people here this morning, and I had touched on the redwood conditions in this article; and my observations in the redwood were that there is no timber that grows that will resist fire as redwood will, and there is no better condition for reforestation. It always seemed to me as though, if these cut-over lands in the redwood could be acquired for the small sum that they no doubt could be bought for, it was the most ideal condition for reforestation in the world, that is, in our United States' world; for the simple reason that they sprout from a sucker from the stump. I cited in that article the conditions at Mill Valley. Many of you no doubt have been there. When I was there two or three years ago the decayed and down frame of the old mill still stood there, and the trees that were cut by that mill at that time had put out suckers that were perhaps sufficiently large for milling again.

MR. PARDEE. The same thing has happened on Redwood Peak, back of Oakland. I have been watching that for forty-odd years.

MR. HOXIE. Those conditions are ideal. In the redwood belt the lands were all acquired years before these forestry ideas were taken up

by the Government, and for that reason I presume they make no attempt whatever to have any supervision over them. To show you the comparatives, this is the map of California, and the dark portions show the reserves of the State. You can see it is quite a large portion of the whole.

MR. PARDEE. About one third.

MR. HOXIE. Unless there are some other questions that any of you have, I think I have about exhausted my subject at this time. Of course the hard part of it is to take it up briefly. It is a subject of such volume that it is not an easy matter to cover it in a brief space of time.

MR. LEWERS (representing the Law Department of the Southern Pacific Company). Before taking up what I desire to say in regard to the proposed law, which I understand is proposed, not in the sense that it has been adopted and formulated as the plan of the Commission, but merely for the idea of making some suggestions—

MR. PARDEE (interrupting). Set your mind at rest on that, Mr. Lewers, I haven't even read it.

MR. LEWERS. I desire to call your attention to and read a paper that was prepared by Mr. McAllaster, the land commissioner of the company, prepared in the light of his experience in looking after certain timber lands belonging to the Central Pacific Railway Company, and also in connection with the Union Pacific, he having come to this State from having worked along the same lines on the Union Pacific. This paper was prepared in the form of a letter prior to the time when this act was proposed or was sent out for suggestions; and Mr. McAllaster desired me to explain that it is not intended as a complete exposition of his views; and the paper itself indicates that it has not been completed. He also, since the preparation of this paper, has come to certain conclusions in connection with other matters based on the suggestions contained in this proposed law. Many of those suggestions are such as to meet with his approval, and, taken in connection with the article which he has already prepared, may perhaps furnish a basis on which the entire subject may be profitably discussed. This letter was written on March 4th—

MR. PARDEE (interrupting). Will he take up the bill, and furnish us with further data in regard to his opinion?

MR. LEWERS. I shall refer, when I come to that point, to that particular matter, and perhaps it may not be necessary for Mr. McAllaster to do that. This letter is addressed to the Conservation Commission of the State of California, and it reads as follows:

"It is conceded by all that police powers are properly administered by municipalities rather than that individual householders should undertake to protect their properties by the employment of armed watchmen.

"It is likewise conceded that protection against fire, within municipal boundaries, is better administered by the municipality than by the individual property owner.

"At one time or another individuals may express more or less dissatisfaction with the amount of taxes required to be paid, or with the manner in which the same is spent by the municipality for those purposes, but it certainly must be conceded that under no circumstances has the cost to the property owner by way of payment of such taxes been anywhere near equal the cost to him had he been compelled to individually maintain his own armed watchman, or his own water supply and fire fighting apparatus.

"The same reasons which control the organization of a municipal fire department and the maintenance of the same by the municipal officers acting for the taxpayers and disbursing the money of the taxpayers, are equally strong when consideration is given to the necessity, and to the proper means, for the protection of the valuable timber lands in California.

"Heretofore it has been left for the timber owner to undertake such protection or not as he pleased.

"For many years conditions did not require the logger to acquire any considerable area of timber beyond his immediate necessities; consequently the title to the land remained largely in the United States; neither the United States nor any one else paid much attention to fire protection, and whatever loss there was fell mainly upon the United States. During later years, however, loggers have found it necessary not only to provide for immediate necessities, but to acquire timber lands sufficient to insure the permanence of their operations during years to come, and it has followed that in order to further insure the permanence of their industry, they have been compelled to provide protection against fire. This has resulted in each individual owner doing much or little in the way of fire patrol, as the conditions existing in respect to his particular holding seemed to require, the general policy being to do as little as possible; and yet at the same time the necessities of the case have gradually demanded the enlargement of this work until now it has become a burdensome matter; because of the existence of small holdings within the larger and the impossibility in many cases of securing coöperation by the small holder, either by reason of their lack of interest or inaccessibility, it seems as though the point has now been reached where the burden of administration should be placed upon the State, but at the expense of those directly interested, including those who cannot be reached except through the usual taxation process, and the following plan suggests itself to me as being practical, easily operated and assuring the minimum of expense to owners of timber lands and to those whose holdings, while not themselves timber lands, are so situated as to be subject to injury from any fires that might originate in or run through the timber:

"1. The State Forester divide the timbered areas of the State into fire districts, following topographical lines and having due regard to the possibility of selecting some particular viewpoint from which the major portion of the district can be seen.

"Of course, lands not timbered and those which may be somewhat timbered, but not valuable enough to warrant the expense of protection, should be excluded from such district, save and except such small areas as may be almost or quite surrounded by timbered areas; small areas of non-timbered lands, and the improvements thereon, situated within timbered areas, whether used for agriculture, grazing or mining, are in as much jeopardy from fire originating in the adjacent timber as are the timbered lands themselves, and therefore such lands should bear their proportion of the expense of protection. Like lands, lying wholly outside of timbered areas, should not be included in the district and should not bear any part of the expense.

"2. State Forester select a 'lookout point' in each district as a site for the firewarden station of that district, and the State acquire by deed, lease or condemnation, a small area, say one or two acres, at such 'lookout point.'

"Such point should, of course, be the top of a hill or mountain from which the major portion of the entire district can fairly well be seen. Doubtless any private owner, certainly the railroad company, would be glad to lease the ground, for such firewarden station, to the State for a period of years at a nominal rental, charging only the stumpage price for any timber which would have to be cut in order to make the site available for the purpose intended, and doubtless permission could be secured from the United States for the occupancy of public land for that purpose, if such 'lookout point' proved to be on public land.

"3. The State construct a suitable building at each station and install necessary furniture therein, and connect the same by telephone line with any and all constructed telephone lines operating within the district.

"A building constructed of logs cut in the immediate vicinity, under agreement with the land owner, or the United States, and furnished with a bed, table, stove and a few chairs, would be ample for the purpose intended.

"4. State Forester appoint a suitable person in each district, resident within the district, as firewarden for that district, whose duty shall be to reside at the 'lookout point' during the dangerous season of the year, from—say June 1st to October 31st, of each year, during which time such firewarden shall be paid a salary not exceeding seventy-five dollars per month; such appointment to be made prior to May 1st of each year and to hold good for one year.

"5. The State require all telephone systems, whether public or private, to furnish free service within the boundaries of each district for all calls to or from such firewarden relating to fires or fire protection within the district.

"If there is any question as to the power of the State to require such an arrangement, I think there is no question but that every telephone company, whether public or private, would readily enter into such an agreement with the State.

"6. The firewarden of each district appoint deputy wardens at as many points within his district as he shall deem necessary, or as may be available, for the complete protection of the district; each deputy warden to be paid thirty cents per hour for all time spent by him in fighting fires, and also to be paid twenty cents per mile for the air line distance one way, between the deputy's home and the site of any fire which he may engage in fighting; such appointments to be made prior to June 1st of each year and to continue in force for one year, unless earlier recalled or the deputy resigns, in which event the firewarden to make a substitute appointment for the unexpired term.

"7. Firewarden, upon discovering a fire or being advised of one, shall telephone or otherwise inform the deputy warden who can most easily reach the same, and such deputy warden shall thereupon immediately proceed to the fire and take charge of the work of extinguishing the same.

"8. Any deputy warden learning of a fire in his vicinity shall immediately advise the firewarden, or, if for any reason that is impossible, he shall immediately proceed to the fire and, upon arrival there, unless he shall find another deputy warden has preceded him, or until one may appear with instructions from the firewarden, he shall take charge of the work of extinguishing the same. If he shall find another deputy warden in charge, or one shall subsequently appear pursuant to instructions from the firewarden, he shall consider such deputy to be in charge of the work and shall render all assistance possible.

"9. Firewardens and deputy firewardens to be authorized to require any available persons to assist in extinguishing fires; such persons to be paid for their services not to exceed twenty-five cents per hour for the time spent on the work.

"10. Deputy firewardens to make a bill against the State for each person entitled to compensation for fighting any fire, including one covering their own services; such bills to show the name and address of the payee, time spent fighting the fire, rate of compensation and amount. Such bills to be approved by the firewarden and the State Forester, and thereafter paid by the State through the usual channels for the payment of bills against the State.

"11. Firewardens to be charged with the same duties in respect of any fires occurring during the entire period of their appointment, but not to be paid monthly salary, except during the period of residence at the 'lookout point,' but instead to be paid thirty-five cents per hour for any time spent in connection with any fire occurring during the time of non-residence at the 'lookout point.'

"12. The State levy a tax for each year upon the value of all assessable property within the boundaries of each district, collectible in the usual manner through the counties in which such property is situated, sufficient to meet the expenses of fire protection in such district. In case such levy is insufficient in any year to meet the expenses in any district, such amount as may be necessary shall be paid out of the general fund of the State and charged against that district, and the general fund of the State shall be reimbursed for advances so made out of moneys collected from the fire protection tax levied during the next succeeding year.

"13. For the preliminary work of districting the timbered areas, acquiring station sites, constructing buildings and telephone lines, the State appropriates the sum of \$-----."

Now, that is as far as Mr. McAllaster had proceeded at the time when the law—which, I understand, is based on the British Columbia law—was sent out by the Commission for suggestions. Now, a modification that Mr. McAllaster has taken from the proposed law, and one which has undoubtedly sound reason behind it, is that suggestion that a portion of the expense of the fire patrol system, whatever it may be, shall be paid out of the license fund obtained by issuing fish and game licenses. Now, the reason for that of course is obvious. The owners of the timbered land are in comparatively few instances—I think all will agree—to blame for the fires which start. The usual fire starts from some other cause; and, according to the last report of the State Forester, a large number of these fires start from campers, fishermen, and so on, who are passing through the country. Some start from lightning and some start from causes which we do not know—a large number of them. For that reason it would seem to be a matter of fairness to all

concerned that the property owner who resides upon the timbered lands, or who owns it should not be called upon to pay the entire expense of its protection. It is true it is his property in a sense; but the duty of the State in preserving that property, I think is recognized by all as going beyond the individual interest of the property owner. If the State looked merely to that there would be no occasion to do anything except leave it to the property owner himself to provide such protection as he saw fit, or if he did not see fit to have any, let his property burn up. But that is not, I take it, the view of the Commission or of any proposed laws.

MR. PARDEE. Let me interject right there to ask—do you suppose Mr. McAllaster would approve a plan whereby all the cost was to be borne by the property owner if that were the only thing that could be gotten through the legislature? That is a practical question to ask and we have to be up against those practical questions when we are dealing with legislatures.

MR. LEWERS. I suppose if that was all that could be had, we would have to agree.

MR. PARDEE. I have no doubt but what the game and fish men over the State, the amateurs and the *dilettanti*, would make a great big fuss if you attempted to do that until you had explained it to them over a course of several sessions of the legislature, which, of course, we do not want to wait to do. But, if it were necessary, in order to get this bill through, to say to the fish and game men, who pay their license of a dollar a year, "Why, we are not going to take any of your money. That is all right. Don't fight our bill"—as a matter of practical legislation we may perhaps have to come to that. Under those conditions, do you suppose that Mr. McAllaster would consent to having all of the cost put upon the property owners?

MR. LEWERS. I can only answer it as I did before. If that practical situation arose we would probably be compelled to accept it; that is, if it were determined in the first place that it was necessary that something should be done.

Now there are certain laws at the present time, which, if carried out, will undoubtedly furnish a very large protection. Now, there is also a large part of the timbered territory in this State under the control and active supervision of the forestry service of the United States—about one third of the State. Now, it is estimated, according to the proposed law, that a tax of one cent an acre be levied upon land returned by the respective county assessors as timbered land. Now, that in the first place is subject to the objection and criticism that it is indefinite, in that it does not furnish any fixed head, but leaves it to the county assessor to determine what he shall regard as timbered land. It is subject to the second objection that there are many kinds of lands not properly timbered land within any definition that is recognized, that should be subject to the tax, because they will be directly protected. They are within the fire risks.

MR. PARDEE. Who shall determine what is timber land and what is not?

MR. LEWERS. If there is to be any method of determination, that should be determined by the Conservation Commission itself in a proper direction contained in the statute.

MR. PARDEE. You think that would be a better tribunal than the county assessors?

MR. LEWERS. Personally I do, but I think that ought to be defined in the act, so it shall not be left entirely to the judgment of any person as to what land shall come within saving power, but that the statute itself should furnish a definition so that the land itself should determine the fact.

MR. PARDEE. Do you think it can be done readily?

MR. LEWERS. I think so; in fact, I believe it is necessary for the validity of the act that it should be done.

MR. PARDEE. That is not in the law.

MR. LEWERS. Not as it now reads; and as it now reads there is no tax on anything except timbered lands. It does not contemplate anybody paying for protection who gets protection—

MR. PARDEE (interrupting). How, for instance?

MR. LEWERS. The one who owns a small clearing within a forest area; the man who owns mining property within a forest area, or any other property, which would be protected by any efficient system of patrol.

Now, there is another consideration which I am sure the Commission will take into account; and that is this: So far the investigation of the entire subject has gone at the present time, judging from the remarks which I heard here during the day, there is considerable difference of opinion as to what ought to be done. Assuming that we are going to levy a tax for doing certain things, what are those things? And as long as those are undetermined, we are in no position to determine at this time whether that tax should be one cent or two cents or half a cent. As a practical proposition in determining whether we are to have any law at all, that becomes extremely important. I understand Mr. Glavis estimates there are about ten million acres that will be subject to this tax.

MR. GLAVIS. Yes, I do.

MR. LEWERS. From that we get a certain revenue. Under the proposed law if you levy one cent an acre, and you get a like amount from the fish and game licenses, there will be two hundred thousand dollars a year available for your fire patrol system—

MR. PARDEE. I think you may leave out the fish and game appropriation. I don't think you will get that yet, but later.

MR. LEWERS. Why is not the man who owns the property, who is being called upon to give up a certain amount of his own individual receipts, in subservience to the police power of the State, entitled to say that he should not do that and allow others to pay for the fiddler.

MR. PARDEE. The point is that that man is not much in evidence at the legislature with an organization, but the fish and game men are there, and they are very jealous of their prerogatives in those regards, and I think we will have very great difficulty, if not an impossibility to take anything of that kind at this time. We will get it later.

MR. LEWERS. Then should not a portion of that expense be borne by the general fund of the State?

MR. PARDEE. That might be so.

MR. LEWERS. I do not think it is fair, that is, in the abstract, that the property owner should alone bear the expense for things for which he

alone is not to blame; and that criticism in general can be made of any provision of this proposed law; and, coming right down to the main proposition in which I am personally interested, there are numerous provisions here concerning the liability of railroad companies, placing upon them a greater burden—not only a like, but a greater, burden of individual responsibility for fires occurring along the right of way. Now there is a sound basis of classification probably which will distinguish a railroad from any other property owner so far as the fire risk is concerned, unless we make the concession that is made in this very law, that if you burn oil that distinction ceases to exist. Now, I do not believe that there are very many locomotive engines in the State of California that burn anything except oil at the present time. Now, if that is a fact, there is no sound basis for saying that a railroad company should be subject to any greater liability in the way of ultimate expense, taxation or otherwise, for fires along its right of way than any property owner with reference to fire near his property. Now, under the law as it now stands, the railroads may be called upon to furnish such men as are called for at the expense of the railroad. If a fire is found burning within a certain distance of the track the railroad is presumed to have caused it, and that presumption can be escaped only when the State Forester is satisfied that it did not. That is, the only appeal is to the judgment of the State Forester.

Again—and this is applicable not only to railroads but to any private owner—if a fire occurs, and the employees of the private owner, whether railroad or lumber company, are turned out to fight that fire, and that fire has occurred, we will say, without fault or neglect on the part of the owner of the land, he can, by complying with certain rather stringent requirements, get back half the expense of fighting that fire, providing he has done everything that the State Forester requires, complied with all regulations along certain lines, whether they had anything to do with the fire or not, and has put in certain sworn proofs, and has prepared a blue-print of the ground, showing where the fire was, he gets back half of it.

MR. PARDEE. Don't you think he is pretty lucky to get any of it back?

MR. LEWERS. If he is to be taxed to pay for general fire protection he ought not to be at any expense whatever.

MR. PARDEE. As a matter of practice don't you think he is lucky to get any of it back?

MR. LEWERS. If he is compelled under penalties reaching as high as nine months at hard labor.

Again, he is subject to this difficulty, if any complaint is made against him for the use of any appliance, not that he is found guilty of using an improper appliance, but a complaint filed against him by some fire-warden, from the instant that complaint is filed against him he is enjoined from using that particular appliance until he is acquitted, and if he is acquitted, he gets no damages, no recompense for the injury that may have occurred, the loss or damage from being compelled to stop his operations.

Again, he is presumed to be guilty, and the burden of proof rests upon him to prove in court that he was not guilty. And there is a further criticism (I am merely taking up these in a general way). I

would be very glad, if the time permitted, to point out to the committee, or any one that might be designated by them, certain specific objections which I think under our constitution are valid.

MR. PARDEE. Would you mind putting those in writing and sending them in to us?

MR. LEWERS. I would be very glad. One of those I desire to call attention to generally, because it is a matter of very great practical moment in determining what shall be done; and that is with reference to the power of the Commission or the Forester (both are given such power in the proposed act) to make regulations, and violations of such will be criminal offenses. Now, it is true that our Supreme Court in a recent decision (220 United States) have held that by going on a Forest Reserve in violation of certain regulations of the Secretary of Agriculture is a criminal offense, and that it is not an unlawful delegation of power by congress. But our own Supreme Court has held in a somewhat similar instance—similar in principle but not in fact—that the state legislature under our state constitution cannot delegate to individuals or subordinate bodies the power to legislate and create and define crimes even though the legislature has in the first place said what the punishment shall be.

Now this proposed act, based upon the British Columbia act, is full of provisions for regulations and of penalties for the violation of those regulations.

Now I do not believe, in the light of the decision in the 63d California, under a similar point, that any of those are valid; and that is a matter which should receive, and undoubtedly will, very serious consideration in the framing of any bill that may be hereafter introduced.

Now in regard to the matter of expense, coming back to what I said a moment ago, I do not know what the average cost of patrolling, maintained by private interests in this State, is. I know that some maintain a very effective system of patrol. We have had indications here to-day of very great care and considerable expense being made and used by different lumbering men throughout the State to protect their forests. So far as we are concerned, we are interested to the extent that we maintain a patrol now of approximately over one million acres of land in this State. The cost of that patrol, which has been fairly efficient, although it is not as efficient as it might be, is about one third of a cent per acre; to be accurate, thirty-four one-hundredths of a cent per acre per year; paying only from thirty to fifty dollars, and in one or two instances, seventy-five dollars a month to watch for forest fires, report them, get help, and so on, and that is counting the entire expense chargeable to that; and we have very few serious fires. Now, we have been unable, under any such system as that, to carry on any burning out of underbrush or débris, or to give the forest that protection which perhaps it needs. I am in doubt, after listening to various speakers this morning, in my own mind, as to what a forest does need, but that is one of the things that is to be determined; but I mention that as an instance to give some basis on which we might estimate the proper amount to be taxed if we are to adopt that system for protection. My suggestion is that this, being a practical matter, and starting out with it, we should be very slow in changing what laws we now have, and we should be even slower in adding any burden of taxation which might cause general objection

until we can gradually get at some system that will, from experience, be demonstrated to be satisfactory to all, and be economical in proportion to the protection that is afforded.

MR. PARDEE. Your company is in the same position it was some six or seven years ago, in that it does not want anything done?

MR. LEWERS. Frankly, I think that our present forest laws ought to receive a very careful trial before we decide that it is necessary to make any sweeping changes. The general opinion, as expressed here this morning, seems to be that our laws at present, so far as the laws are concerned, are sufficient; that the only thing is that there has not been, perhaps, sufficient appropriation for their proper carrying out. That may very likely be the correct solution of the whole situation. We may not need more law as much as we need the application of the law that we have.

MR. PARDEE. That is not infrequently the case.

MR. E. W. CAMP. I represent the Atchison, Topeka and Santa Fé Railroad Company, and I was glad to hear this morning that this proposed bill was nothing more than a basis for suggestion, because I would be sorry to think that there was any intention of presenting this precise measure to the Legislature of California. For some time the United States Government, I believe, and perhaps the State government or the states north of California, had under consideration the question whether they should not compel railroads passing through the forests to use oil-burning engines in order to avoid the danger to the forests by the use of coal- or wood-burning engines. Now this bill puts no premium on the use of oil-burning engines. It imposes the same liability on railroad companies that have equipped with oil-burning engines that it imposes on railroads, if any in the State—and there are perhaps very few—which are still using coal or wood. So far as I am informed the Atchison Company and the Salt Lake Company—which uses some of the mileage of the Atchison rails—are equipped throughout with oil-burning engines. We use no coal in the engines in California, nor any wood. It is virtually impossible, I think, that any forest fire should be started from one of those oil-burning engines; and yet this bill, as drafted, establishes a presumption of law that any fire started within two hundred feet of the right of way—

MR. ———. No,—found burning within two hundred feet—

MR. CAMP. Found burning within two hundred feet of the right of way is presumed in law to have been started—not from an engine—but by the railroad company. My suggestion is that, in framing up this bill, some recognition be given to the fact that oil-burning engines have or are likely to be required for the very purpose of avoiding setting out of fires; and engines that do use oil for fuel shall be exempted from these drastic provisions of the law. Of course, wherever it is found as a fact, if ever, that an oil-burner engine has set a forest fire, it is perfectly proper that the railroad company should be called to account for that and be made to account. Then, again, this bill speaks about spark arresters. Spark arresters are not used on oil-burning engines. I am informed that they cannot be. At any rate there is no occasion for their use. It speaks also about dumping live coals or burning material on the track. That, also, is virtually impossible with an oil-burning engine.

So, it seems to me, the railroad (and I will not take up any more of

your time) that railroads which equip themselves with oil-burning engines should be excepted from the provisions of this act,—at least any provisions which are drawn with reference to a different condition, that is, with reference to railroads that are equipped with coal- or wood-burning engines such as I suppose the railroads are equipped with in British Columbia. I think, certainly, the act must be drawn with reference to conditions that do not exist for the most part in California.

MR. WATERS. I am representing the San Pedro, Los Angeles and Salt Lake Railroad. I have to leave at four o'clock. I simply wanted to add our indorsement to what had been said by the representatives here from other railroads.

MR. PARDEE. Well, put your ideas in writing.

MR. WATERS. I will be pleased to do that.

MR. LEWERS. Supplementing what Mr. Camp has just said with reference to railroads starting fires, I have in my hand the figures handed me by Mr. DuBois of the statistics gathered by the Forestry Service in the United States as to the causes of fires in 1909, 1910 and 1911.

In 1909, out of 476 big fires, 22 started from railroads, 84 from lightning, 17 incendiaries, 37 from brush burning, 99 from campers, 14 from sawmills, 152 unknown; miscellaneous, 51.

In 1910, out of 553 fires, 11 started from railroads.

In 1911, out of 797 fires, 24 started from railroads, and there is only one other cause giving a fewer number, and that is sawmills, so that it cannot be regarded as an extraordinary risk.

MR. ALEXANDER BALDWIN. I represent the Western Pacific Railroad, and while this question has only just come to my attention, I want to say that we are interested in this, and if it would be of any help in making suggestions, I would like to reserve the right to do so.

MR. PARDEE. You will not only reserve the right, but it is freely conferred. We will be very glad to have you do it.

MR. BALDWIN. We represent here, especially as to this question of fires along the right of way, a two hundred foot proposition, which is very interesting to us. Our line burns oil, and while I agree thoroughly with Mr. Camp in what he said, if I can lend any assistance I will be very glad to do so.

MR. PARDEE. We will be very glad to have what you have to say put in writing and sent to us.

MR. BURNETT. There was one observation made by Governor Pardee with reference to the Fish and Game Commission. They have got a law in Oregon, which was passed last year, in recognition of the fact that most,—I say most, advisedly—most of the fires that get beyond control and do this damage arise from the operations of fishermen and hunters. They have there in that law a provision that it will be competent for the Governor of the State at any time to declare a closed season as to any particular animal, fish or bird, in any particular locality in that State, so that if it is a phenomenally dry year, and it seems to be likely that there is an unusual extra menace from those gentlemen, their operations can be limited. They certainly ought to contribute to it in some form.

MR. PARDEE. They ought to and they will in time, but I doubt if it is practicable to make them do it now. I would like to see them do it.

MR. BURNETT. There was a point also in Mr. Lewers' talk. He spoke

of the fact that other than pure timber lands should bear the expense, if there is to be any expense, of patrol, and contribute this two cents an acre, or whatever it may be. He spoke of the fact that clearings adjacent to timber lands receive immediate protection, and, therefore, should contribute; but there is the other side of that, too. They are also in themselves the source of fires, and for that reason they should come in and contribute. Probably, acre for acre, they are a very much greater source of fire than the timber lands.

MR. PARDEE. Where would you draw the line in areas?

MR. BURNETT. That would have to be drawn just as it is drawn with reference to assessment districts of different kinds—special assessment districts for the benefit of certain localities,—the Stockton street tunnel, for instance.

MR. PARDEE. You could not put that into the law by metes and bounds. You would have to leave that to the discretion of some board.

MR. BURNETT. A discretion that would be exercised in general terms based on a definition in the act, that is very true, but it could be approximated; and that is one form of criticism which I think may be made most logically in connection with this British Columbia law. It seems to ignore what we have always regarded in this country as of importance in all lawmaking, namely, that as far as possible the law itself defines the scope of its operation; and it is only when the necessities of the situation absolutely require it that its application should be made to rest in the discretion of an official. This is simply, from beginning to end, the appointment of some one as a czar over lumber operations and everything else, and it is wholly foreign to our system of lawmaking, I submit.

One other point, too, that was brought up for discussion, as to the amount of this tax. You were not here this morning, Governor, but the redwood men had the floor for a while, and I think we showed the Commission that certainly in Humboldt County and in Del Norte County, at all events, the fire hazard in green redwood is simply non-existent. No one thinks of maintaining a fire patrol any more than they would in an asbestos factory.

MR. PARDEE. Are you familiar with the Santa Cruz country down there, where they do have fires in the redwoods?

MR. BURNETT. When you get farther south undoubtedly there is a fire hazard, there cannot be any doubt of it, and perhaps, possibly, in parts of Mendocino County, although it is very trifling there, as the gentlemen from Mendocino County showed. When you get farther north it is non-existent, except in cut-over lands, which is a peculiar proposition of itself. But that simply leads to the point that it would be absurd and unjust to tax the owners of redwood lands, say two cents an acre, when we were not going to receive, and do not mean to receive, any protection whatsoever. That would lead further to the proposition that there would be some principle of districting, such as suggested by Mr. McAllaster. If anything is going to be done at all in reference to the matter—

MR. PARDEE (interrupting). I should think you lean to the opinion that nothing ought to be done, then.

MR. BURNETT. I don't know. I only know about my own country, for which I speak. I say, advisedly, there is no occasion for anything in reference to the redwood industry.

MR. PARDEE. That is north?

MR. BURNETT. That is north in Humboldt County and Del Norte, and possibly Mendocino County.

MR. PARDEE. How about Santa Cruz County in the redwood line? Wouldn't you have anything done there?

MR. BURNETT. I would like to hear from the Santa Cruz people. They know their business better than I do.

MR. HOXIE. There is one point that ought to receive attention. It particularly refers to forest reserves. With us, in the Trinity Forest Reserve, there is a proposition by the Federal authorities—it is not compulsory at all—but they asked us to join with them in the proportionate expense of fighting fire in that particular reserve. Well, of course, they have their telephone systems and their lookout points and their men, and under a condition of that kind it would seem along the right lines to join with them. Now, if there is a law passed similar to this one and the State requires from us a cent an acre, why, there could hardly be avoided the conflict that I speak of. Outside of a forest reserve that condition could not exist. Would that condition exist, Mr. DuBois?

MR. DUBOIS. Yes, it does.

MR. HOXIE. They simply asked us to join with them in the expense in that reserve. Our lands are all in that reserve and we naturally would be glad to join with them.

MR. PARDEE. Your suggestion would be, that forest lands within the forest reserve should be exempted from the provisions hereof?

MR. HOXIE. It would seem as if a conflict would arise there. There might also arise a conflict of authority. I just call your attention to it.

MR. PARDEE. I am glad you did.

MR. DUBOIS. To explain that a little further, I have some figures for the value of coöperation rendered; in 1909, \$6,400.00; in 1910, \$28,659.00; in 1911, \$4,492.00.

The high figure in 1910 was the assistance rendered by the War Department for the troops in the Forest Hill fire. That is not a very large figure in comparison with the total amount spent, however.

MR. PARDEE. What was the total amount spent?

MR. DUBOIS. Sixty-three thousand six hundred and ninety-one dollars in actual fighting fires, and about \$200,000.00 in patrol for prevention work.

MR. PARDEE. That is a very small percentage.

MR. DUBOIS. Very small.

MR. PARDEE. I should say offhand less than one per cent, without figuring it, though.

MR. LEWERS. After the final bill has been drafted, in case the Commission does draft one, will there be any further meeting for the discussion of that, for the exchange of views?

MR. PARDEE. That has not been talked of in the Commission, but I have no doubt, if there is anything about which there will be any sort of a row, of course we will have one.

MR. LEWERS. The discussion to-day has clearly evidenced the fact that there are a great many plans for carrying out the same thing.

MR. CUTTLE. I should think there should be another opportunity, at least one, if not more than one, for these people to be heard on anything we are preparing.

MR. LEWERS. There is plenty of time.

MR. PARDEE. I do not see why there should not be, either. While the Commission has not yet talked of the matter, I have no doubt there will be such meetings.

MR. LEWERS. We will be very glad to have further opportunity when the Commission has formulated its plan more definitely.

MR. PARDEE. We will be very glad to hear you.

MR. CAMP. If the Commission should send out a few hundred copies of the proposed draft, such as you have sent out of this draft, the parties interested could study it, and submit their views either in writing or at a conference like this.

MR. PARDEE. I think we can do that, too. I think that is a very good suggestion. What we want, finally, is to get something that, while it might not suit everybody, it will suit everybody enough so that they will be willing to help it go through the legislature. That is what we want. It is what we expect, and that is what we are going to get.

If there is nothing further, we will adjourn until to-morrow morning at ten o'clock.

PROCEEDINGS OF MARCH 27, 1912.

The Commission met at ten o'clock a. m., pursuant to the adjournment, and the following proceedings were had (Honorable George C. Pardee presiding):

MR. PARDEE. Mr. DuBois is not here to open the discussion with his paper. Is anybody else ready? Has anybody got anything else to say as to what transpired yesterday, any criticisms or amendments, or any suggestions to offer in regard to yesterday's talks and discussion?

MR. CHARLTON. I don't think Mr. DuBois understood he was to be here this morning. I believe he was under the impression it was to-morrow. I can 'phone over to him.

MR. PARDEE. I wish you would.

(At this point Mr. DuBois enters the meeting.)

MR. PARDEE. Mr. DuBois, are you ready?

MR. DUBOIS. I am if you are, gentlemen.

MR. PARDEE. They all seem to be.

MR. DUBOIS. I am going to speak of logging railroad transportation, I understand. It occurred to me, when Mr. Glavis spoke of this meeting, that there was a subject that might take the attention of the Conservation Commission, since it was proposing laws or changes in legislation which would better the forest conditions throughout the State.

At the last general election by popular vote an amendment to the Constitution was adopted, which provided that the right of eminent domain might be extended to logging railroads, but if it was extended, or if the logging railroads took advantage of the right of eminent domain that thereupon they became common carriers. That amendment was passed and now stands, as I understand it. I am liable to get bogged down in law here. I am not a lawyer at all.

MR. PARDEE. Even the lawyers get bogged down in law.

MR. DUBOIS. As I understand it, the principle of that was for the protection of certain ranches in the redwood country on the rivers, men who had settled on land, small tracts of agricultural lands, rather far up the rivers, particularly in Mendocino County and Humboldt County. When you come to apply that constitutional amendment to the sugar and pine logging railroads which run from the valleys where the main line railroads are, where the markets are, up to the mills, up to the logging operations, it fails to work as well as it was intended; and it occurs to me that some modification of the common carrier law, as regards those particular railroads, might be necessary.

The Forest Service has negotiations now pending which cover the sale of about two billion feet of timber. Two hundred and twenty miles of main line railroad will be necessary to put the timber on the market. The prospective operators immediately started to figure out what the effect of this constitutional amendment would be on these main line railroads, which were in the nature of feeders, to tie up these bits of railroad to the main transportation system, to move their timber. The logging railroads, as you understand, will run from the mills, which will be on the main line of the railroad to the woods, and that, if any of the operators take advantage of the right of eminent domain granted them by the constitutional amendment to become common carriers, when

they do become so they are subject to all the laws which govern common carriers in the State of California. Those laws were designed for the main transportation systems and corporations that were formed for the main purpose of moving passengers and freight. That is where their money is; moving passengers and freight is a secondary consideration in any lumber proposition. Of course, when they got to be common carriers they would engage in moving either the national forest timber or privately owned timber. That very easily can be met; but if they are common carriers in the sense of the present lines of California, their grant is subject to forfeiture for failure to operate for any period of six months; and as most of the timber is located at an altitude of four to eight thousand feet, they are bound to fail to operate for six months in any year. Their operation will be subject to various other provisions, such as running one passenger or one mixed train over the entire length of the road every day, which might be entirely impracticable in the case of a logging railroad, a main line logging railroad, where they had a haul of sixty miles and could only haul one logging train out a day. They would not be allowed to suspend operations during the winter according to the present railroad laws, common carrier laws, as I understand it, unless the total mileage of their road were above five thousand feet elevation. There is also a doubt whether they could suspend at all when they got through the particular logging. For that reason it struck me that it might be worthy the Commission's attention to go into this further with the help of a lawyer, not with my help, and find out what would be necessary to guarantee to other stumpage owners, to the Government, and to settlers along the line of these logging railroads, the common carrier principle of logging railroads, without putting them under the existing law which would give them burdens too onerous to operate under. I simply leave this up to the Commission in the form of a suggestion.

MR. PARDEE. Will you have that in writing, Mr. DuBois?

MR. DuBOIS. I did not have.

MR. PARDEE. I wish you would put that in writing.

MR. CORNWALL. I might say that the State of Washington two years ago passed a law by which logging railroads were only required to engage in the character of traffic which the railroad was originally designed to carry.

MR. PARDEE. You can get a copy of that statute and put it in.

MR. DuBOIS. That would fix it.

MR. PARDEE. Do you know anything about forest fires, Mr. DuBois?

MR. DuBOIS. Yes.

MR. PARDEE. Suppose you tell us something about that from the standpoint of the forester. We had some papers yesterday and some talk yesterday in regard to forest fires. All of the gentlemen here that I heard yesterday were in favor of light burning through the forests. I understand there is some difference of opinion on that.

MR. DuBOIS. Considerable. How far would you want me to go into that?

MR. PARDEE. Just as deeply as you want, and if you don't go deep enough I will endeavor to get you in deeper.

MR. DuBOIS. The deliberations here yesterday struck me as if the lumbermen were not agreed among themselves as to the extent of fire

risk. I had hoped to be excused from getting into this discussion, because what you wanted, as you understood it, was the views of the lumbermen not only on the proposed tentative law, but on any other phases of fire protection legislation that they thought necessary. Our ideas on that, the ideas of the United States Forestry Service, are pretty fairly well fixed. We consider that there is a positive risk all through the dry season in California in pine timber. I don't know anything about redwood timber.

MR. PARDEE. Who does in your department?

MR. DUBOIS. The State Forester would probably know considerable about it. None of our lands cover any of the redwood belt, none of the national forests.

In pine timber the Forest Service, as you know, is concerned not only with the present merchantable stand, which it markets as far as the producing capacity of the forest will allow, but it is concerned with the future stand, and I do not know but to a still further extent than it is concerned with the present stand. We are hired to protect the forest from fire, not only the mature forest of to-day, but the forests of fifty years from now. The national forest-cutting leaves on the ground a stand of timber equal to about twenty-five per cent to thirty per cent of the present merchantable stand, the thrifty-growing, sharp-crowned, black-bark sugar and yellow pine trees. In addition to that, it leaves all the young stuff. In the course of the cutting the brush is piled by the operator and later burned, in the fall when it is safer, by the Forest Service. To that extent we do light burning; and we find that, in order to protect the young growth on the ground (any young growth is valuable in this State), it costs anywhere from twenty-five to fifty cents a thousand feet of lumber removed to burn that acreage, or reducing it to an acreage basis, to clean up our timber sales would cost on an average of something over fifty cents an acre. We find that considerable care is necessary to protect the stand, and by the stand I mean all of the stand on the ground, which, of course, would have to be protected if you are figuring on a second crop. From the sales in northern California that have been made we figure on a second crop there of approximately the same volume as that being cut to-day in between forty and fifty years—an average of forty-five years, I should say, when we ought to get at least the same, if not a slightly higher, revenue from those lands. We could not get it, of course, if we did not protect all of the young growth on the ground.

MR. PARDEE. That is, of course, from seedlings up?

MR. DUBOIS. From seedlings up to trees twenty-four inches in diameter.

MR. BAUMGARTNER. When you said that the present method of cutting left twenty-five per cent to thirty per cent, I think it was, of the timber standing, you mean that you left that portion of the present merchantable timber standing there?

MR. DUBOIS. Yes. Now, to that extent we do light burning; but applying that principle outside of the cutting areas, outside of the areas that are under intensive administration, where we have men on the ground all the time, would be absolutely absurd in the face of our present total available funds. It costs us for patrol, for protection from fire during the dry season on the area where our protection is intensified,

from three quarters of a cent to a cent and a half per acre. We had a total fund of about \$700,000.00 last year. With that we protected from fire pretty efficiently twenty-eight million acres of land. Half of that, fourteen million acres, is particularly dangerous, low down, in the real timber belt. To apply to an area of fourteen million acres any system that requires over a few cents per acre would be absolutely out of the question with the present funds available. As time goes on more and more timber land will be cut over, according to those methods I explained. Therefore, more and more timber land will be cleaned up intensively, brush piled and burned. The areas are comparatively safe as they stand now, the cut-over areas; therefore, the more national forest timber that is sold and put on the market, the more areas are rendered practically safe from fire; but we will continue to maintain the patrol of the forests during the dry seasons right along at the same time. That, in my judgment, is far more important than fall burning, and as I said, fall burnings are from our point of view prohibitive on account of their cost.

Were there any other points on national forest fire protection?

MR. PARDEE. Those gentlemen who were here yesterday were very firm in the assertion that it did not injure the forests when they made these annual light burnings.

MR. DUBOIS. According to figures that we have taken in the pine forests of the Klamath Lake region—which is very much like the pine forests of Modoc County—we scaled some thousands of butt logs, mature trees that went through the mill. We found the money loss that was directly due to repeated light surface fires (the area covered by this sale was just such as was shown in Mr. Hoxie's timber, that fireproof timber) the loss, I say, was anywhere from 10 per cent to 25 per cent, directly traceable to the fires. The average loss, I think, was nineteen per cent per log. The loss came principally from degrading. On account of the fires the boards cut from those butt logs had to be thrown from No. 1, 2, clears, into No. 3 or lower; and any lumberman knows there is a vast difference in value between those grades. Not only that, but the reproduction was remarkably poor on those areas, having been burned over year after year, and our cut, therefore, had to be much lighter. The lumbermen themselves were allowed to take off much less per acre than otherwise they would have been, because we had to work on a seed-tree basis rather than on a second-crop basis. We had to make sure that the reproduction came before we could allow the taking of the total stand of the mature timber.

MR. BAUMGARTNER. The statement was made yesterday that the land that was burned over gave a better stand of reproduction than that which was not burned over.

MR. DUBOIS. I can't agree with the gentleman who made that statement.

MR. BAUMGARTNER. What season was the land burned over in Oregon?

MR. DUBOIS. In the fall, I should judge.

MR. GLAVIS. Mr. Walker said yesterday that the Forest Service made some investigation of their light burning.

MR. DUBOIS. Yes.

MR. GLAVIS. What was the result of that?

MR. DUBOIS. Our estimates of the damage were considerably higher than Mr. Walker's. Our figures showed, I have forgotten the percentages, but something like fifty per cent of everything ten inches and under was killed; also, our figures on the cost were considerably higher than Mr. Walker's estimate.

MR. PARDEE. Can you supply us with those figures?

MR. DUBOIS. Yes, sir; if you ask for them.

MR. PARDEE. I do so now. I understand why you say that. Then there is that wide difference of opinion between the practical lumberman and the so-called theoretical forester.

MR. DUBOIS. I won't admit there is any such a thing as a theoretical forester.

MR. PARDEE. I said the so-called theoretical forester. There is that wide difference of opinion as to the result of light burning.

MR. DUBOIS. Yes, there is a difference of opinion. I am not sure that all of the lumbermen, the so-called practical lumbermen, are in favor of this light-burning theory, by a whole lot.

MR. PARDEE. I would like to see one of them who was not. So far I have only run across those who seem to be in favor of light burning.

MR. BALDWIN. That nineteen per cent loss was simply nineteen per cent from the butt log?

MR. DUBOIS. Yes, sir; butt logs only, nineteen per cent of the logs measured,—not from the total stand.

MR. PARDEE. The butt logs measured in the mill?

MR. DUBOIS. Yes, the mill tally.

MR. BALDWIN. The butt logs would average twenty-five per cent of the tree?

MR. DUBOIS. No, I don't think so; not of a seven- or eight-log pine tree.

MR. PARDEE. This seems to be an important question, and I would like to have it threshed out as thoroughly as possible, and I hope nobody here will hesitate to differ with the so-called theoretical forester. But we would like to get that into our record. What we are after is the opinion of as many people as we can get on all of these things, and the harder they scrap and the more they bring these things out the better I, for one, will be satisfied. What is the cost of light burning? Have you any figures on the cost?

MR. DUBOIS. Fifty to seventy-five cents an acre, according to the time you do it. I judge it will be necessary to do it every four years.

MR. CUTTLE. The estimate yesterday was thirty-five cents.

MR. WALKER. That includes the preparatory expense. The work has run from about twelve and one half cents to fifty cents an acre, according to the kind of ground and the men in charge of the work; but I figure that we can work the country over, fill all of the hollow butts and follow it up with subsequent burning, for from twenty-five to forty cents an acre.

MR. CUTTLE. How do you fill up the hollow butts?

MR. WALKER. With a shovel and dirt.

MR. CUTTLE. Does that protect it?

MR. WALKER. It absolutely protects the mature trees.

MR. CUTTLE. Can you keep that right in there in such a way as to prevent fire from getting in?

MR. WALKER. I suppose, in the course of time, the elements will naturally reduce the size of the fill until, in the course of ten or fifteen years, the fires would get in. By that time we would fill them up again.

MR. PARDEE. You could fill them up as often as may be necessary. Then you are rather of opinion that your private enterprise is more economical than the Forestry work in these matters? I am asking simply for information and your notion of it?

MR. WALKER. As applied to our own property, I think it is. We paid pretty high prices for our properties and we are willing to spend twenty-five, forty to fifty cents an acre to protect it.

MR. PARDEE. About every four years?

MR. WALKER. At the end of four years we will simply have to burn the country over. I anticipate we can do that for from two, three and four cents an acre.

MR. DUBOIS. Won't your final result be that you have a stand of mature timber on the ground and nothing else?

MR. WALKER. I think not. I think we will do away with a great many of the smaller white fir; that has been my observation that the principal damage is done to the small fir tree and not very much to the small pines. There are places where there are little sapling trees that high, maybe as high as a person's head, standing in the dense brush, that we will kill; we cannot help it; but if fire ran through in the summer time, during the dry season, it would kill not only those, but a great deal more that we do not damage by fall burning.

MR. PARDEE. Do you get a crop of seedlings after the fire?

MR. WALKER. It is only about two years since we did the first burning. We haven't had a chance to see how that is going to work out.

MR. PARDEE. Would you call that an important matter as to whether you do or not?

MR. WALKER. Yes. We consider the stand, as Mr. DuBois calls it, the reproduction; we consider that an important element.

MR. PARDEE. From seedlings on?

MR. WALKER. Yes. From everything.

MR. DUBOIS. I understood you are going to fill the holes in the butt of the tree and burn over carefully, and from now on every four years you would burn over, generally at a much lower cost, light fire run over the ground every fall. Are your seedlings going to stand that?

MR. WALKER. I think so. Of course, we will kill off some of them.

MR. CUTTLE. What percentage of those young seedlings are killed or left in the ground?

MR. WALKER. That is a very difficult matter to say. In the first place it is hard to say when a seedling is killed. Because the seedling is smoked up and some of the needles are scorched it does not follow that the seedling is killed, as I have observed. I have seen many where the needles were almost entirely burned off, and have come to life again.

MR. CUTTLE. Do you think that such burning would leave on the ground enough young trees to have a good stand of timber on the ground after you have cut out the mature timber?

MR. WALKER. I feel perfectly sure of that in my own mind.

MR. GLAVIS. Mr. Walker, unless you did start ground fires, isn't there a much greater danger of the entire old growth, as well as the young growth, burning up sometimes?

MR. WALKER. That is the point that we are fearful of, that the woods would get in such a condition that when the fire does come we would have a repetition of the Idaho and Washington fires that they had two or three years ago.

MR. GLAVIS. And they absolutely destroy everything?

MR. WALKER. Yes.

MR. PARDEE. Are you familiar at all with the Yosemite floor?

MR. WALKER. I have never been in there.

MR. PARDEE. You are, Mr. DuBois, are you not?

MR. DUBOIS. Yes.

MR. PARDEE. As I remember there is a very dense growth of young trees all the way from four feet to twenty feet tall, just as close as they can stand, and azaleas, etc., are allowed to grow around the outskirts of them, and the branches of those very densely standing small trees are dead. What would be the effect of a fire in there, Mr. DuBois?

MR. DUBOIS. It would burn up the young timber complete.

MR. PARDEE. Would it have helped things if that had been burned off as in the old days?

MR. DUBOIS. It depends what you call "helping things."

MR. PARDEE. Would it have kept down this dense growth and allowed seedlings at wider intervals to grow up so that they could survive?

MR. DUBOIS. I think they would have to grow thick or not at all.

MR. PARDEE. What do you think about that, Mr. Walker.

MR. WALKER. We have burnt over areas that were so densely timbered with saplings that you could scarcely force your way into them and the fire did not reach into them at all. It ran under them, but there was no damage because we had cleaned off any material the year preceding. It did not get into the branches or run through them.

MR. PARDEE. It occurred to me there in the Yosemite country that that would necessarily follow.

MR. WALKER. If burnt in the dry season, but in the fall after pretty good rain—

MR. PARDEE (interrupting). Then it is a question of seasons and not fire?

MR. WALKER. I do not think there is any doubt that the burnings in the dry seasons do a great deal of damage, but in the fall the fires burn so light that they do not burn hot enough to do a great amount of injury. The only trouble we have had is to get the fire to run enough. That costs extra money. We have waited late in the season until the conditions were so unfavorable to burning that the fires would not run enough.

MR. PARDEE. The fire ran itself out and quit?

MR. WALKER. Yes, and we would have to start them here and over there, every fifteen or twenty feet or so, and start them again and have a crew of men strung out fifty feet apart, burning out a patch here and a patch there.

MR. BAUMGARTNER. I wanted to ask Mr. DuBois, in your judgment are the conditions and interests of the lumbermen operating privately owned property such as to cause them to regard the factor of future production of timber on that land as important as it is regarded by the Government?

MR. DUBOIS. I do not see how it can be. They are not as long lived.

We cut over our holdings in such a manner that we figure that we will get the same returns more or less in forty-five or fifty years. Very few lumber companies can afford to figure for that length of time ahead, to work their financial plans that far ahead.

MR. BAUMGARTNER. That was my impression, but I did not know.

MR. STANDISH. I think it is practically impossible to-day for the private owner to expect returns from timber in such a short period as would make it remunerative for him to reforest his lands.

MR. BAUMGARTNER. I did not quite catch that.

MR. STANDISH. I said it is practically impossible to-day for the private owner who expects returns from reforestation within such a period as would make it profitable for him to engage in it.

MR. CUTTLE. Mr. DuBois, about the accumulations of débris where there is no burning done at any time but all of the efforts made to keep the fires out. You say that you would have a new stand in forty-five years. What would become of that débris littered from the fall of the trees in all those years?

MR. DuBOIS. I think that you and every one here has ridden through the woods where there has not been any fire for ten or fifteen years, and you have not seen any abnormal débris on the ground. It disintegrates into soil. The winter snow in the Sierra is pretty heavy and it will break down a tree on to the ground and smash it flat.

MR. BAUMGARTNER. Any laws that this State would pass, would they be operative on government property?

MR. DuBOIS. I hope not. I don't hardly think so.

MR. PARDEE. He withdraws the original answer and substitutes.

MR. BAUMGARTNER. Then the only question for this Commission and for the legislature and these lumbermen and all of us to consider is whether or not we should take the Federal Government as a model for the control of privately operated properties.

MR. DuBOIS. It seems to boil down to just about that, the way I think.

MR. CUTTLE. I would like to ask the lumbermen present what they think of the proposed law in the State of Maine that gives the State supervision of cutting timber on private property so as to maintain the stand of timber?

MR. PARDEE. Mr. Walker, what do you think of that?

MR. WALKER. I think there is considerable merit in that.

MR. PARDEE. How much?

MR. WALKER. I think there is considerable. I am not familiar with that law to go into the matter very much. I think that the State has a certain right.

MR. PARDEE. Assuming that this is the state of facts in Maine, that the Supreme Court there has given the legislature an opinion and they could pass a law that would compel the owner of private timber not to cut off any timber except such as the State may designate; and if the State should say that he should not cut any timber at all on the claim that it is for the benefit of the community at large, that he should not be allowed to cut it—how about that?

MR. BAUMGARTNER. Does it go that far?

MR. PARDEE. I say, assuming.

MR. BAUMGARTNER. I do not think the law goes as far as that.

MR. PARDEE. The opinion of the Supreme Court did in the matter.

MR. CUTTLE. My recollection was that the supervision of the State should be had on all privately owned lands, not to prevent them cutting timber, but to compel them to cut it in such a way that the public welfare would be cared for in maintaining a stand of timber on that privately owned land all the time.

MR. WALKER. My father has spoken about that a great deal, and I am quite sure he would not object to any such regulation as that if it could be kept within reason. It would not be property entirely taken away from him. I think the public is entitled—

MR. CUTTLE (interrupting). As I understand it, the opinion of the Supreme Court of the State of Maine was that the owner could not cut all the timber and leave the land waste where there could be no reproduction, destroying all the good timber. The opinion of the Supreme Court there is that the State may enact a law that would compel the timber-land owner to cut his timber in such a way as to protect the young timber and leave sufficient seed trees and other standing timber there so as to maintain the supply and bring about proper reproduction.

MR. WALKER. I think that is perfectly proper for the State to do.

MR. PARDEE. What do you think about that, Mr. Standish?

MR. STANDISH. I think the State has the power to regulate the forests as well as the other things that they are regulating now. I do not know how it would affect us. Certainly if such a law was made it would have to be made so that it could be complied with by the timber owners. Now, we, all of us, agree, I think, that at the present time, we are not operating under any policy that allows the private individual owner to reforest his land. If such a policy could be formulated I believe it would be a good thing for the State.

MR. PARDEE. We haven't yet taken that matter up, let me say, before the Commission at all. This is just a flyer.

MR. CUTTLE. That is right.

MR. STANDISH. And I think conditions would probably adjust themselves so that it would not be a great hardship on timber owners.

MR. PARDEE. Mr. Johnson, what do you think?

MR. JOHNSON. I think that it is a matter that ought to be studied out very carefully. In the first place, if it means anything at all, it would mean certain regulations, and the question, what regulations? If we had perfect men, if we had gods to make the laws and make these regulations, they might get something; but who is there at present that can say just what should be done on the question of reforestation? And it seems to me that it is better to leave that somewhat to nature and to natural laws. I do not know anything about the mountain timber. I know that in the redwoods the question of reforestation is ninety per cent keeping the fires out of the cut lands, and that more and more is being kept out by selfish motives—not so much the question of reforestation, but for other motives, and there is reforestation going on in the redwoods from the little knowledge that I have about it. That can be helped very much by leaving some timber on the ground. It goes without saying that if timber was left on the ground it would be the small timber. In the system of logging in the redwoods it would be pretty much impossible to leave much small timber there without it being injured. I do not believe the time has come in this State, certainly not in the redwoods, when we could have State regulation of cutting.

MR. PARDEE. You don't know whether that applies to the pines or not?

MR. JOHNSON. I don't know anything about that.

MR. PARDEE. You are simply a redwood man?

MR. JOHNSON. Yes, sir.

MR. PARDEE. Has anybody anything to offer on that particular matter? This is merely a flyer started by Mr. Cuttle. The Commissioner has not discussed it, and not even thought of it, except academically, but it is an interesting subject.

MR. CORNWALL. The Supreme Court of the State of New York held that where an individual owned timber tributary to a watershed, and the removal of the timber would have an injurious effect upon the watershed and thereby restrict the fall, that an injunction would be issued to prevent the owner of the land from cutting the timber.

MR. PARDEE. Cutting any timber?

MR. CORNWALL. Yes.

MR. PARDEE. I remember that.

MR. DUBOIS. Any compensation?

MR. CORNWALL. I don't know as to that.

MR. PARDEE. The Supreme Court of Maine went on to say that was not taking the property without due process of law, and so on, and with the same result that you speak of in New York. Mr. DuBois, the question of reforestation has been mentioned here. What has the Government been doing in regard to that in this State?

MR. DUBOIS. It has been experimenting entirely. Some three years ago the Secretary of Agriculture issued a statement of his policy in regard to reforestation. He wanted work undertaken on rather a large scale on all the potential forest areas that are not now bearing forests. We undertook this work rather against the judgment of the local silviculturists out here, and we went at it as conscientiously as we could. The results were almost nil. That is as far as any practical results from direct seeding on the ground were concerned. We found that at a considerable expense we were able to get some results from planting nursery stock, but nobody knew definitely just what was the right nursery practice or the right field planting practice, or had carried on experiments enough to reduce the cost per acre to anything within reason. We put that out in the form of reports and were relieved from more or less arbitrary order to plant on a large scale, and were allowed to go ahead on a strictly experimental scale, which we are doing now.

I can give you a better idea of how much reforestation work the Forest Service is doing in California by saying that the total appropriation for the district last year was about \$770,000.00, and for field planting \$5,000.00; that is, we are so very dubious of the practical results of that, that we have reduced it and hope to keep on reducing it until we work the thing out to a strictly experimental scale; and, aside from merely the technical side of it, I do not believe any private owner could afford to make investments of that character unless he was doing it from purely philanthropic motives and did not hope to get a financial return, from the present technical difficulties in the way of planting, the length of time it takes to grow the species that are native to California, and the present state of the lumber market. Figuring future values at anything like present rates it would pay minus interest on his investment.

MR. PARDEE. Is there anybody in the redwood business that has gone into this charatcer of reforestation as an investment proposition?

MR. JOHNSON. Nobody that I know of. We have planted some four or five hundred eucalyptus trees, but we are not prepared to say how that is as a commercial proposition. Even a lumberman has some little sentiment about the country, especially if he has lived there a great many years; but the redwood reproduces itself from sprouts very rapidly, and it is one great difficulty to people who want to clear it up for agricultural land to get rid of those sprouts. We tried to clear up a cattle ranch, and if this Commission comes up to Mendocino County I would like them to go out on the Mendocino River and see some second growths.

MR. PARDEE. Is there good fishing there?

MR. JOHNSON. Yes.

MR. PARDEE. We will go.

MR. JOHNSON. And we will have somebody to put out the fires that you leave. That is a good example of second growth because the people in Mendocino began lumbering about fifty years ago, and there is a very good second growth of redwood.

MR. PARDEE. What do you know about reforestation, Mr. Walker?

MR. WALKER. We have never experimented with it, and never cut any timber in California. We have had no opportunity of studying it. In Minnesota the conditions were different and we never tried it there. The original stand of timber was very light, and the cut-over lands, some of them, were in the belt, and much more valuable for that than they were originally as a stand of timber, and practically all of the ground cut was agricultural land when cleared up, so we know nothing about reforestation from practical reforestation. It is our intention, though, and my father's ambition, to handle his California timber with a view to reforesting.

MR. PARDEE. Yes, he is very much interested in that.

MR. WALKER. I might say it is a hobby of his.

MR. PARDEE. Has anybody else anything to offer on reforestation?

MR. STANDISH. I would like to ask Mr. DuBois a question. From your observation and statement I would deduce, then, that the present forest area of California will not be increased by reforestation. Is that correct? That is, the various kinds of brush lands that are now used for cover—they probably will not be reforested?

MR. DuBOIS. It will be increased not by artificial reforestation, but, we hope very much, by natural reforestation, by keeping the fire out of the brush fields where we know young firs are coming up, and that eventually will make a stand which, in a term of years, will cover the whole brush fields. Fire protection is our keynote of reforestation.

MR. POWERS. Don't you find that there is a heavy growth of manzanita and the so-called wild sagebrush where that is not retarded by the fires or burnt up by the fires, it has a tendency to choke out the second growth of timber?

MR. DuBOIS. I find that the manzanita and the chaparral in general are largely the result of fire; that the area that it covers is increased by fires, and that about the only way to get rid of these chaparral areas is to hold fire from getting in them until such time as the young fir, which will stand considerable shade—a good deal more than white pine or

sugar pine—can bore up through them. Shade is about the only thing that will kill chaparral in northern California. Fire will not. Once burnt off, chaparral is the first thing to come back. After that has been going for a long enough time to establish a sort of humus under the brush, the fir commences to work through it and bore up.

MR. PARDEE. You have not quite answered Mr. Powers' question directly, whether the chaparral will keep down the growth of trees and prevent it.

MR. POWERS. I think Mr. DuBois has answered that question.

MR. DUBOIS. Yes, it will, to a large extent, if there were no brush at all there, no brush or stumps, the chances are that it would come up with tree species in the first place. The reversion of the area to a tree type requires that much longer, but it will finally come back to the type if fire is kept out.

MR. CUTTLE. Mr. Charlton has had much experience in reforestation, has had immediate charge of it.

MR. CHARLTON. We have been experimenting in the southern part of the State, planting trees for about ten years, and so far, as Mr. DuBois says, we have obtained no results whatever, and from now on we are simply experimenting with it; but from the cost of the work I cannot see where it would pay any private owner, at present stumpage values, to attempt artificial reforestation. We are endeavoring to secure our reforestation solely by keeping out the fires and by conservative logging. And, so far as this brush coming up after the timber has been cut is concerned, we have areas down there in which the logging is very heavy, and some seed trees left, and the whole tract is now coming up to worthless brush.

MR. PARDEE. With any trees sprinkled in at all?

MR. POWERS. There is occasionally, in an open spot you see a few trees, and occasionally you see them coming up through the chaparral, but as a whole the reproduction is very poor. Of course, it may be due to the fact that there are few seed trees left, or it may be due to the dense covering of the chaparral. I think it is probably both.

MR. PARDEE. Anybody else got anything to offer on the question? Mr. Standish, you were going to favor us to-day, were you not?

MR. STANDISH. I don't think so.

MR. PARDEE. I thought you were down here on the program.

MR. GLAVIS. No. I think Mr. Standish could give us some ideas on the duty of the State and the Federal Government towards reforestation or to the lumbermen by relieving the cut-over lands from taxation.

MR. PARDEE. How about that, Mr. Standish?

MR. STANDISH. As I said a few moments ago, I cannot see how, under present conditions, the timber owners can expect to reforest their lands. I asked Mr. DuBois the length of time it would take for the trees in the mountains to become mature. I understood him to say one hundred years. Is that right, Mr. DuBois?

MR. DUBOIS. To make a saw-log in that time.

MR. STANDISH. I think in the redwoods we would get to results in forty to seventy-five years, but, of course, that is all problematical. Now, it is a very large question, it seems to me, as to what shall be done with our deforested land. That is, whether they shall make indifferent farms, or be used again for bearing trees. If we eliminate the timber-

men themselves from this reforestation, it seems to me it comes back, then, to the Federal or State Government. Now, I have wondered if some method could not be employed whereby the sum which is received yearly from the Federal Government by somebody within the State could not be used to repurchase or purchase these cut-over lands; whether some stated price could not be offered for these stump lands at the time when they were first cut over and when their value would be less. As I understand, the State to-day has an interest in the gross amount received from stumpage values of twenty-five per cent. Of course, the State would lose its taxes on these cut-over lands during the period of reforestation; but when the timber did become mature then they would still get their twenty-five per cent. The general government or the state government, so far as a pecuniary investment is concerned, would receive very slight remuneration. I do not understand that they are administering the national forests to-day with a view to making a profit upon them. This was simply a thought that occurred to me as possible that might aid in solving the problem of our cut-over lands. I asked Mr. DuBois the question as to whether the forest area was being extended in the State. It seemed to me that it is very doubtful whether the timber land is going to encroach upon the brush land for almost centuries to any appreciable extent. I do not imagine that we are reforesting to-day any appreciable amount of forest land. Hence the State is losing thousands and thousands of acres of land that are fit for forests by inaction. I think that is all I have to say.

MR. PARDEE. What would you think of a proposition for the State taking over, at an appraised value, all cut-over timber land?

MR. STANDISH. I think it would be very good, indeed; but, as you stated yesterday, in regard to the difficulties of getting appropriations, would it not be very hard to get an appropriation from the legislature for that purpose?

MR. PARDEE. I think it would.

MR. STANDISH. On the other hand, may be the moneys that are coming in annually from the sale of federal timber, in which this State has its twenty-five per cent interest, might be applied to that purpose.

MR. PARDEE. That goes into the school funds of the counties.

MR. DUBOIS. The twenty-five per cent does.

MR. STANDISH. I understand that the share of the State last year was \$50,000.00, but even that sum could purchase a good many acres of used ground.

MR. PARDEE. What do the denuded lands amount to in value?

MR. STANDISH. It would depend upon the quality of the soil. They would run anywhere from \$2.50 up.

MR. PARDEE. How high up?

MR. STANDISH. In Humboldt County, for instance, along Humboldt bottoms the lands are valued very highly, but that proportion of the forest land that is denuded is, of course, very, very small; in fact, it would be unnecessary to take lands that are first-class agricultural lands.

MR. PARDEE. It would be foolish, because it would be worth more as agricultural than growing forest lands.

MR. STANDISH. In Mendocino County they have been logging since the early sixties, and all that we have to show for reforestation in Men-

docino County is small bottoms along, say the Big River, to which Mr. Johnson refers as the best example. I think along the Albion there are bodies that possibly could be logged to-day. That is the extent of the natural reforestation of the lands to-day in Mendocino County. That is small returns. Of the thousands and thousands of acres that have been cut in Mendocino County, I think a very large proportion are used to-day for agricultural purposes; especially a little back from the coast, where the land is very poor.

MR. PARDEE. How about it, Mr. Johnson, as to the State buying the cut-over lands?

MR. JOHNSON. I figure it would be rather hard to fix a price on it. The cut-over land varies a great deal in value, and some of it is, as you say, a great deal more valuable for farming purposes than for reforestation.

MR. PARDEE. Suppose the State should do this: Say that it would not pay more than five dollars an acre, and the value thereof to be determined by some state agency?

MR. JOHNSON. Not pay more than five dollars?

MR. PARDEE. Not more than that, and the value to be determined lower than that by a state agency running all the way from two dollars up to five dollars.

MR. JOHNSON. And not take in lands that were more valuable?

MR. PARDEE. No; say something like that. I took as an illustration five dollars.

MR. JOHNSON. I don't know what I would think about it. But it occurs to me that the natural leaving it alone will accomplish just as much as if the State owned that land; if it was more valuable for reforestation than grazing purposes, it will naturally come up any way, because I do not think the State could do anything to help that reforestation except keeping out fires.

MR. PARDEE. Would not the State be more apt to do that than the private owner when the land is not of much value?

MR. JOHNSON. I don't think so. I think fires are going to be kept out more and more in the redwoods, because they are going to be interspersed more and more with agricultural patches, especially fruit lands, and those interested will see that the fires are kept out.

MR. PARDEE. How about this aspect of it—that finally, if it be not taken over by the State, it will become again forest land in private ownership, and as the State—as my socialistic friends say—should own all of those things; looking at it from that standpoint, why should not the State (I am assuming now the rôle of the Socialist), why should not the State take over those cut-over lands?

MR. JOHNSON. If you are assuming that rôle I will have to admit right away that I am not capable of working out the question with you, except that I believe, in a general way, that private motives have done more to advance the world, and will do more than public legislation.

MR. PARDEE. Than public ownership?

MR. JOHNSON. Public ownership, with what it implies. I believe the community in general will get more out of it if land is privately owned; that selfish interests of private owners will put that land to the highest use to which it can be put quicker than the public ownership will do it; and while there are certain lands up there now that might be considered

valuable for nothing except reforestation, in five or ten years from now that condition might be changed—and has changed; we know it has changed now; land that we thought, a few years ago, wasn't good for anything, now you see fruit trees on it.

MR. PARDEE. That is so in a great part of your country up there.

MR. JOHNSON. Yes, and we do not know what will happen in the other part of the country. Now reforestation is taking place in a great many of the redwoods where land is in private ownership, and the community gets the new timber just as much, if it is in private hands, as if it were in public hands. It gets the use of the timber and it gives employment.

MR. PARDEE. How about the comparison that these theoretical forest timber land men make with our method of reforestation and the German method?

MR. JOHNSON. I don't know so much about the German method of forestation. I know one time, out at the mill, we had a forester of the Bavarian Government up there, and he spent a week; he had been traveling through this country with a view of looking up the reforestation conditions; and he seemed to think that the natural reforestation of the redwood was the most wonderful thing that he had ever seen anywhere. Of course, he told me about the reforestation, a great deal of it, in Bavaria and other parts of Germany and Switzerland. I was particularly interested in one thing that he told me, and it was that he told that there was one lumbering operation that had been in existence for five hundred years. I think that was in Switzerland.

MR. PARDEE. Then you think you would get better results in this country by private reforestation than you would by Government reforestation on the scale and following the methods that are pursued, for instance, in Germany?

MR. JOHNSON. I think we would in the redwoods.

MR. PARDEE. How about the pines?

MR. WALKER. Judging by past experience, there has been no reforestation of pines that I know of; no one has ever attempted it. There does not seem to be any incentive, any motive for it. There is no money in it, and it never has been tried; and any hope we have for reforesting our property is based upon the idea that some time or other conditions will be changed that will make it favorable.

MR. PARDEE. So that it will pay, in other words?

MR. WALKER. So that it will pay. Just how that will be brought about I don't know.

MR. PARDEE. It will not pay now for the individual to do it, perhaps, but how about the future of the State? Suppose that the State, as a matter of protection to itself and posterity and all that sort of thing, should take up all of these reforested, denuded lands now, and should put upon them the German method—how about it?

MR. WALKER. I think, if they should undertake to buy the cut-over lands without any restriction as to how the lands should be cut over, it would bring about just the result that you wish to avoid: that the lands would be skinned with the intention of their going to be sloughed over on to the State, unless there were rules and regulations prescribing how the land should be cut, what should be done with the débris, and how burnt over, and how much timber should be left on the ground—

unless those points are properly covered it would work a hardship. It seems to me that rules and regulations and laws could be prescribed whereby the State would offer to buy from the lumbermen lands cut over, we will say after the fashion that the government lands are handled, under the guidance of the Forest Service, where they require a certain number of mature trees to be left—seed trees I believe they call them—and proper attention to be paid to the seedlings, as they call them; for the State then to step in and buy lands cut over in that condition on some equitable stumpage basis according to the amount of timber that is left on the ground. Then they would have something. But to buy a great lot of land that has been skinned, I do not believe it would work out.

MR. PARDEE. Under the conditions that you mention, why should the State step in? Why should not the State leave it to the private enterprise to carry on this enterprise? The State is protected because the forests are protected. Why take it away from the individual?

MR. WALKER. They ought not to take it away, but I think they could afford to make an optional proposition.

MR. PARDEE. I mean, why should the State buy it? Why should the State have the usufruct of that under those conditions?

MR. WALKER. It would not pay. It would take too long. In our case we have timber enough that the future generations of our family could handle it if kept together in the course of fifty or one hundred years. I have never known it to happen yet. It is a too slow proposition.

MR. PARDEE. Therefore, it should be in the hands of a government that is everlasting?

MR. WALKER. Yes.

MR. STANDISH. I should like to say one word, which, it seems to me, is germane to the question of reforestation, and that is, whether it is desirable for the State to have timber lands as well as agricultural. I agree with Mr. Johnson that lands, say in the redwood district, will reforest themselves as rapidly in private ownership and are reforesting themselves as rapidly under private ownership as under State; but back of all that is this: There are very few private owners who have any definite plan for reforesting their lands. I know the Albion Company were holding cut-over lands that had been cut over years and years ago, and were holding them because they could not dispose of them, and we did not know how to utilize them at all. We tried putting stock on them and I guess they either died or something happened. Then we tried farming operations on the best of the land. The result was that when some one came along and wanted a piece of land, even after it had been years and years, after the sprouts or suckers had grown up very appreciably, why, we sold the land to an intending settler, and all this growth of years was destroyed. He was not raising a forest; he was trying to utilize it for some purpose of his own; hence I think that if the State had those lands they would have a definite plan of reforestation and from the time they bought them this plan would be proceeded with.

Now, another thing—I am speaking more particularly of the redwood belt with which I am familiar—these lands are held in large groups, which is a very favorable condition for reforestation. Every settler

that gets into those lands, he exposes the young growth more or less to a fire; in fact, I think it would be pretty hard to do much with a forestry area that is largely interspersed with settlers' clearings. I think there is the distinction between the proposed public ownership of those stump lands and the private ownership as held to-day.

MR. PARDEE. There is, as you know, Mr. Standish, a proposition that is being footed and talked of considerably of having these cut-over lands taken by the State and made into forest stations, so to speak, forest farms, experimental forest farms, under the supervision, for instance, of the University in arboriculture and the like, silvaculture, so that we may have a standard by which forestry operations can be carried on; and it has been seriously proposed for the State to acquire all the cut-over lands, except, of course, such as are more valuable for agriculture and other purposes, but to absorb as a matter of procedure all of the cut-over lands of the State. How does that strike you? You have heard of it, of course?

MR. STANDISH. As I said before, the only solution of it, of the reforestation question, is the State or Federal ownership of the land.

MR. CORNWALL. I may say that the legislatures of Oregon and Washington a few years ago passed a law—I introduced the bill myself in both states—which was declared unconstitutional, which provided that the owners of cut-over lands could, with the consent of the State, throw their lands into conservation zones where they would remain for a period of forty years. The tax on the land was based on \$2.50 per acre, and the State would immediately take charge of the lands, look after the fire hazard, and at the end of forty years—where we find in western Oregon and Washington trees attaining a diameter of twelve to fourteen inches and say thirty feet in height—at the expiration of forty years the timber would be cruised and estimated, and if thought desirable by the individual ownership to have it cut it would be cut, for which we allowed the State ten dollars flat an acre and twenty-five per cent of the value, reaching the State from the public auction method.

By amendments to the constitution of Oregon we have now reached the stage where that is constitutional. I would like to send the Commission a copy of that law. Private ownership in this State can only be made possible by a reduction in the annual tax. In other words, the question of taxes absolutely dominates the question of reforestation; and if you can make a tax low enough and leave the lands in such state of reforestation so as to insure a growth, there is some chance for the individual owner; otherwise the State will have to do it.

MR. BAUMGARTNER. When you spoke of being impressed by the statement of the Bavarian forester, to the effect that one lumber company there had been operating for five hundred years, did you mean to convey the impression that you thought that conditions would work out along those lines in this country, and that therefore reforestation and the conservation of timber reserves would be best effected by the lands remaining in private ownership?

MR. JOHNSON. No, I do not know as I did mean that. I thought it was a good argument about the State reforesting. Of course it pays evidently in that country to reforest. The same condition might not apply here at present any way, with the low prices and value of the stumpage.

MR. BAUMGARTNER. There is another big difference, I think. The conditions are so fixed there that the potential value of these lands is so much more clearly defined that they can be held and operated or transferred on some basis of their future productiveness, which cannot be done in this country; but the suggestion appeals to me, Mr. Chairman, very strongly that these cut-over lands might be secured by the State, and held and operated to very great advantage. Mr. Standish, for instance, called our attention to the impracticability of reforestation in areas that were interspersed with settlers. As long as they remain in private ownership that condition is liable to arise and extend, I should think; and if they were taken by the State, the State could hold them in such bodies as to make them practical to use them for reforestation purposes, and those portions of the land that were more valuable for agricultural purposes could be converted to that use in large sections.

MR. DUBOIS. Might I also suggest there that it strikes me that the result of that sort of procedure would be, the State having ownership of a lot of small scattered patches of cut-over land—say that occurred in the pine belt of the Sierra Nevada, it would be almost impossible for the State to economically hold those lands. They would have to stay right there without any management, or without fire protection when they needed it most during the reproducing period. It strikes me, Mr. Walker hit the nail on the head. As it is now the timber operator who has standing timber of merchantable size has no financial incentive to do anything with the timber but to cut every bit of it per acre and let it go for taxes. If he does anything else he is foregoing some of the profit on his just investment. It strikes me as possible—but it would require Federal legislation—in the pine belt to have a Federal law authorizing the taking over of cut-over lands into the national forest administration, and giving therefor stumpage to the operator, the amount of stumpage to be given to depend entirely upon the silvaculture conditions of the cut-over lands. In other words, we can reduce cut-over lands to a dollar and cents basis. If the cut-over land was turned in in good condition it would be appraised at so much per acre. That amount of stumpage would be allowed to him tributary to his mill.

MR. PARDEE. Wouldn't he be likely to do that over and over again?

MR. DUBOIS. He could do that until his own cut-over lands would be ready for him to operate upon. In other words, you would have a working circle all in one ownership that could be operated. With a small block of timber you cannot build a railroad to it. Timber has got to be operated in large holdings, big enough to justify the big initial expense for transportation and milling equipment. The only way that that could be done with any kind of public ownership on a big enough scale to justify holdings, with the forest work, would be to turn them into forest management.

MR. GLAVIS. Your statements that the State could not practically administer small areas as a state forest reserve, I think, would also apply to the Government's failure to practically administer small areas. Has not the Government got a lot of small forest reserves scattered among the states—160 and 640 acres—outside of their main holdings? How do they administer that?

MR. DUBOIS. We do not.

MR. GLAVIS. What is the use of having them?

MR. DUBOIS. To prevent monopoly—to block timbermen out of them.

MR. GLAVIS. And not for the purpose of any scientific reforestation or management?

MR. DUBOIS. Not for reforestation by any manner of means. Most of those small, isolated blocks are standing timber, and there are very few of them. When a particular block of timber in which this isolated block of 160 acres is located, is finally logged by the owner, it could not be logged economically without this 160 acres going with it. That gives the Government a pretty good line on how, when and where the rest of the watershed would go.

MR. BAUMGARTNER. Would not a large portion of the cut-over lands adjoin Government lands?

MR. DUBOIS. A very large portion of them would in California white pine.

MR. BAUMGARTNER. That would seem to be a strong argument.

MR. DUBOIS. And then, again, adjoining present national forests.

MR. PARDEE. Shouldn't there be a line distinctly marking off watershed timber from other timber, and is not the State and national Government interested in the former more than it is in the latter?

MR. DUBOIS. It is.

MR. PARDEE. Has the Government or State any particular interest, except as a matter of preventing monopoly, as you said.

MR. DUBOIS. Oh! yes; decidedly so.

MR. PARDEE. Except in forests that are on watersheds? What other use has the Government, or the people, or the community in general, in timber that is not on a watershed, except as an economical matter of lumbering?

MR. DUBOIS. None, except as a strong economical matter of lumbering.

MR. CUTTLE. Maintaining the timber supply?

MR. PARDEE. But outside of that is a stronger and higher use—the prevention of the destruction of the watershed systems, which is not only a matter of to-day, but for always, which timber is not, in a way.

MR. CORNWALL. I think, Governor Pardee, you hit that very squarely on the head. The question of the relation of the headwaters of these streams to the general prosperity of the country. The Weeks law, with which Mr. DuBois is familiar, appropriated, I think, the sum of two hundred thousand dollars, which had for its object the giving to each State which was making an effort at forest fire protection a portion of the sum, not to exceed ten thousand dollars per annum?

MR. DUBOIS. Yes.

MR. CORNWALL. In order to protect the timber of the watersheds, holding that that was the function of the Government to see that the timber and the watershed were not destroyed.

MR. CUTTLE. What law was that?

MR. CORNWALL. The Weeks law.

MR. CUTTLE. In this State?

MR. CORNWALL. No, a national law. The State of Oregon received ten thousand dollars this year as a part of that appropriation.

MR. DUBOIS. That was for protection, I believe.

MR. CUTTLE. What time did that become a law?

MR. CORNWALL. Last year.

MR. PARDEE. Mr. DuBois, what objection would there be on the part

of the Forestry Service (not speaking with authority, I understand, but as an individual)—what objection would there be to the Forest Service giving the State seventy-five per cent instead of twenty-five per cent of the produce of the forest?

MR. DuBOIS. Merely an economical one, as I should say. The twenty-five per cent is supposed to represent the amount lost by the State by taxes on land that might otherwise pass into private ownership. The other seventy-five per cent is the reimbursement to the nation for the nation's property when it is sold. If the nation wanted to make a free gift of the purchase price of its own property to the State, that would be the nation's lookout.

MR. PARDEE. It has been doing it right along, you know. Not to states, but to individuals—in some cases to states.

MR. DuBOIS. I do not see that the Forest Service would be concerned one way or the other. It would do whatever congress happened to think about it at the time.

MR. BAUMGARTNER. Assuming that the administration of cut-over lands, which might pass into public ownership, would be as efficient under State ownership as under national ownership, is there any difference, so far as the public is concerned, which might own it?

MR. DuBOIS. Assuming the management, after it passed into public ownership, to be equally efficient, it would then only be a question of economical management, wouldn't it? The general government already owns forty-eight million acres, which it can administer cheaper per acre than the State could possibly do.

MR. PARDEE. Anybody else anything to offer? If not, it is very close to twelve o'clock. If there is no objection, we will adjourn until this afternoon at two. This afternoon the proposition is to take up the taxing of timber lands. I hope there will be a good scrap on that. It is a very vexed question, and one that you hear a good deal of on both sides, and a matter of vital importance to the timberman, and some of us think of vital importance to the State on the other hand; and I hope you will come here with your war clothes on, all of you. If there will be no objection we will adjourn until two o'clock this afternoon.

AFTERNOON SESSION.

The Commission met pursuant to the adjournment, Honorable George C. Pardee presiding, and the following proceedings were had:

MR. PARDEE. Mr. Homans, I believe you are to talk to-day about the taxation of timber lands.

MR. HOMANS. I had a paper prepared on this, but find I have left it over in Oakland. However, I will outline briefly what is taken up in it and submit the paper to the Commissioners.

I thoroughly believe that the method in which timber land has been handled in the past will not be allowed to continue indefinitely; but it seems to me that before any radical change should be made in that there are two problems which should be solved first. One is the method of fire patrol, and the other the problem of forest taxation.

The general property tax governs the taxation of timber at the present time, and it is a system which apparently has outlived its use-

fulness. All of the states in this country practically are breaking away from the general property tax system gradually, the banks I believe first, later the telegraph and the telephone companies, until now most other corporations are taxed under different systems. In the early days this method of taxation, in the Middle Ages and the early colonies, worked fairly well. The form of wealth then was visible, and it was easy for the assessors to determine the actual value possessed by the various citizens. Evasion of taxation was practically impossible. Later on economical conditions changed so that we now have an immense wealth in the form of intangible property, such as stocks, bonds, and other securities, which are very difficult to assess; and reports from practically every state by different commissions and others show that there is a general evasion of the personal property tax; and in Ohio, as I remember, a report in 1908 showed that not more than ten and perhaps five per cent of the personal wealth was taxed in that state. Similar figures have been given for other parts of the country.

The problem before us in this taxation question, it seems to me, is the method of taxation. From documents compiled by the National Service Commission it seems that, except in a few cases and in a few states, the personal tax rate is unjust and the timber properties are now bearing a greater burden than other forms of property. We find that the administration of course of the property tax is really a detail. At the same time we find that in California it is no better and probably no worse than in other states. The assessors are usually possessed of no practical skill or facilities for ascertaining the values of various properties. They depend for the most part on the statements of the property owners, hearsay evidence, and the valuations from previous assessments; and such methods as those naturally result in more or less general confusion. We find that at present about twelve states have some legislation governing taxation; that in two of those states, I believe—Indiana and Pennsylvania, I think—the laws have been declared unconstitutional; and in the others they are practically dead-letters. This legislation refers for the most part to bounties, exemptions, rebates and prices. The object of that scheme was for the most part—it was started originally in the prairie states and had for its object the encouragement of reforestation cut-over lands, and more especially establishing forests on non-forested areas. The result of such legislation has been practically negative. A committee appointed by the Massachusetts legislature in 1905 or 1906, where similar legislation had been operative for upwards of thirty years, reported that they had only found sixteen acres in the entire state that had been reforested or in any way affected by that legislation. Some reports in other states give about the same results. It seems that legislation of that kind is really impractical. It has been demonstrated that it can accomplish very little. Under the general property tax of course it is true that if it was strictly enforced it would amount eventually to little less than confiscation of timber properties. As a matter of fact, however, it has not been and is not now being generally enforced. Many assessors seem to realize that the present method is not adapted to a forest investment; and consequently they are not enforcing it. We have, however, no assurance that this haphazard and easy-going method is going to continue indefinitely. For that reason it is now time that we should attempt some reasonable

report, so that owners not only of timber property, but those interested in investments in cut-over lands for an investment, may have some assurance of what the future taxes are going to be, and unless they have that it is certainly impossible for the foresters to encourage this kind of work.

Several schemes have been suggested for reform, and one which seems to be gaining the most headway, and is the most generally accepted as being not only practicable but likely to produce good results is that of taxation on yield, which provides for assessing the land at a nominal value and then the timber, at the time it is cut, going on the principle that wealth should be taxed upon its ability to pay. Following that out it seems to me that such a plan would certainly be advisable and would be feasible. By assessing the ground—really it is necessary to assess the ground each year, otherwise many of our counties would be practically destitute of funds; Trinity County, for instance, would depend for the most part upon the tax on the timber (and we have several others), except such taxes as may come in from lands and mining property. If we attempt too radical a change we are bound to be met with more or less opposition. The only remedy under the present tax system, it seems to me, would be for some kind of state control. We found at a recent investigation conducted during the past winter that the assessed valuations varied not only in the same county for timber lands, accessible or inaccessible, but that there is even a greater difference in the different counties. In El Dorado the timber is assessed at a flat rate of ten dollars an acre and cut-over lands one dollar. In Siskiyou, a county of 780,000 acres, timber land is assessed for six to seven dollars per acre and one dollar flat rate for the cut-over lands, and about the same rates prevail in Plumas and one or two other counties. Going back a little I would like to mention the methods, or lack of methods, which exist at the present time. There are five counties that depend upon the statements of the timber owners for the classification of timber lands; and nineteen counties neither cruise nor examine the timber properties to determine the valuations—absolutely no method whatever. There are two counties only, Lassen and Modoc, that have cruised the timber in order to classify the land according to the amount, quality and accessibility, and have thus some definite idea as to what they have. In the other counties it is a most loose, haphazard method of determining any valuations whatever.

It seems impossible to secure equality of valuations throughout the State except through some state control. That either might be through an official commission appointed, or by some board already in existence, or such other method as might be practicable. That, however, seems doubtful because of the tremendous gain during the past year for home rule. Another scheme that has been suggested and which finds more or less favor is in merely taxing the timber at the time it is cut, omitting any taxes of the ground or the ability of the ground to produce a crop. The timber crop is entirely different from any other crop in that it requires a number of years for it to mature, and during that time there is no yield whatever. Mr. Cornwall, of the *Timberman*, who is with us to-day, has suggested a scheme which is worked out and which might be more or less practical, and he perhaps will speak for himself in reference to that. But in conducting a campaign for reform of

taxation, it seems to me that we should be very careful to avoid creating the impression that it is the amount of taxation to which we object. Just so soon as we do that we will find very strong opposition, especially from the ranchers. There are several states that attempted reform along those lines, and it has always resulted in a clash between the timber owners and ranch owners. All that timber owners want, I believe, and the thing that we want for them, is simply justice in this matter. We want equality of taxation, and we want taxes in proportion to the ability of the property to pay. We also want taxes arranged in such a way that property owners may count upon taxes and figure forest investments as carefully and certainly as they figure any other investment.

I think that covers briefly the point that I had taken up.

MR. PARDEE. You spoke of assessing the land at a nominal value, Mr. Homans; what do you mean by that?

MR. HOMANS. I mean, for instance, we have throughout the State grazing land and chaparral land. We haven't the classification of grazing lands on the assessor's books, and that, as a rule, is land that has more or less timber, but is used chiefly for grazing. It is inaccessible, it is more or less open, and it may contain more or less chaparral, and especially land not adapted so far as known at present to irrigation. That goes in as grazing land. When I say nominal value, I think we might, for instance, assume the valuations now given to grazing land or to cut-over lands which are used for grazing lands, except in those counties where cut-over lands are being placed on the market for agricultural purposes. And I think many companies are adopting that policy, at least they think in their own minds that they will eventually place this land on the market. Take the Hood River fruit territory. While that was cut-over territory, it was assessed very soon after they established orchards there at as high rate as agricultural land. So when I say nominal rate, I mean land at a valuation similar to what might be termed waste land, one dollar, two dollars, perhaps, per acre. The amount of that is not so important, it seems to me, just now, so long as we get that in proportion to other classifications.

MR. PARDEE. What led me to ask the question was, you spoke of the poverty of certain counties in assessable wealth. Now, the train of thought went through my mind, if you assessed that land at a merely nominal rate—and I assumed it would be a dollar or two per acre—you would then reduce the assessable valuation of property in that particular county to a merely nominal figure and that would not give money enough to run our schools on.

MR. HOMANS. We would do that, but on the other hand in most of those counties there is some operation.

MR. PARDEE. Lassen and Modoc, for instance, are there any operations up there?

MR. HOMANS. No.

MR. PARDEE. What are they going to do for their schools? That is the thing I have in mind. I don't care anything about the sheriffs or recorders, or anything about that kind, but what are the children to do up there?

MR. HOMANS. I think we will have to increase the tax on other forms of property, because there are other forms of property up there that I think will stand an increase.

MR. PARDEE. Then you come to the irrepressible fight between those who want the property increased and those who want it reduced.

MR. HOMANS. What shall we do with the children after those lands are logged over? They are there now, but some of the assessors have said when asked: "Just how do you arrive at these valuations?" Some of the counties have classified their lands in four types; Lassen is one of them, running from \$2.50 to \$12.50 per acre. When asked how they arrived at that, they said, "We have tried to place a maximum assessment just below the point that would keep the timber there, prevent cutting." Now, Amador County believes they have done the same thing. Speaking of Lassen again, we have some very large holdings up there which will probably be exploited in the next few years. We have reasons to believe so. Now just when that timber is cut it drops from \$12.50 to \$2.50 per acre, or from an average of \$8 or \$9 to \$1, or \$1.50 per acre, so really we have the same problem again. It is perhaps the question of half a loaf; but how are we going to raise another crop of timber? How are we going to get interested in some half a million acres or more, of logged lands that we have in the State at present?

MR. PARDEE. We heard some of the gentlemen say here this morning that they did not have any notion at all that the question of reforestation would ever be—that there was no incentive at all for private enterprise to reforest as long as there cannot be any money made out of it.

MR. HOMANS. That is true at present, especially under this scheme of taxation where the assessors may, if they will, come in and assess the land for all that it may produce for a number of years; and it is equally true that none of the present owners will consider reforesting seriously; but the fact remains that there are hundreds of thousands of acres that are only suited to the production of timber, and some one must grow it, probably not these owners, but we want to keep it so that some one will. We have a large population in the United States who are interested in living in the woods, in the backwoods in particular, and many of those persons, if they could, through grazing cattle, running a few sheep and small agricultural truck, make a fair average living, would be satisfied if, on the side, they could raise a certain amount of timber.

MR. PARDEE. Are there, anywhere in the United States, any such persons?

MR. HOMANS. Yes. In the Appalachian Mountains we have a mountaineering population who live in that manner; and through our own State we have mountaineers and others who are especially adapted to country life and who prefer frontier life.

MR. PARDEE. Are there many of those?

MR. HOMANS. I could not tell you in figures. Twenty years ago there were a lot of them; now, not so many in this State as several years ago, because it is no longer possible for them to acquire lands, most of them having been withdrawn for forest purposes, except under special permit; but, nevertheless, there are a lot of them, and a lot of them through the Colorado Mountains; and many of our men seeking employment in various walks of life prefer out-of-door work, and having completed that work, they prefer something in the country. Good property in California is becoming very valuable; a family with a little money is not in position to settle in our valleys at the present time, and con-

tinue farming on the proceeds of a moderate sum that they have saved up from their work of manual labor. Another point in that connection is, it seems to me, that we must all agree that we are going to use a certain amount of timber; the country is going to use a certain amount of timber, and there is no other country to which we may turn for supplies, and we are using our present supply, as I remember, about three times as fast as it is growing, and there is really no effort, so far, toward a more conservative use of our forests, excepting so far as the markets demand. There has been an overproduction, I think the timber gentlemen here will agree with me, for the last four years, due to various causes, and which may or may not continue. As I understand, under the provisions of the Sherman act, owners of timber may not form an association and get together for the purpose of preventing an overproduction, and so long as we have an overproduction we have an excessive waste in the wood. You will find that not so much in high stumps, but in long tops and the lower grades of lumber, and it is the upper grades that have to carry the lower. There are many of those mills where the large percentage of low grade—where the margin is very, very close, so close, in fact, that those grades are sometimes left in the woods. That sometimes results, of course, in unnecessary damage to trees which should be left standing and form the basis of a second crop.

MR. PARDEE. You made the statement that none of the timbermen were conserving—that wasn't the word you used—

MR. HOMANS. Perhaps; I did not mean it just that way; in a sense, yes.

MR. PARDEE. They are making no effort at all to save the timber?

MR. HOMANS. Practically none. That is based upon—

MR. PARDEE (interrupting). Have you any notion why they are not? I will ask them, themselves, pretty quick; but I would like to start a scrap.

MR. HOMANS. I would like to answer, but this is my personal opinion from general conditions, rather than concrete; but this summer we are going over practically all of the cut-over areas in the State and make a thorough study of them, as to the conditions as we find them, and the reasons for that, as we can obtain them from the owners and those working in the woods, together with the rate of growth of cut-over areas, areas that have been cut over for upwards of twenty years—to see what we can expect under these conditions, and then what we might reasonably expect with better conditions, with such modifications in present operations as the conditions will suggest. It is my firm belief, however; that from our point of view very little is being done towards conserving the forests, working towards a second crop.

MR. PARDEE. And conserving the timber after it is out. You spoke of the long top, for instance.

MR. HOMANS. Yes, and the high stumps and the long tops vary, of course, with the market conditions. During periods of overproduction, No. 2 common and No. 3 to lower grades are a drug on the market, just as in slabs, for instance, there is a tremendous loss in all of our mills, generally speaking, of slabs. Now, if every mill on the coast should manufacture laths they could stock up our country for several years to come, and there is a general overproduction of shingles as well. There

are many by-products that are not being considered. The profit is too small in comparison with the original investment.

MR. PARDEE. Do you think, if you allowed the timbermen to get together in restraint of trade, that they would then save those tops and those butts and slabs?

MR. HOMANS. I would not like to say that; no.

MR. PARDEE. I thought that was where you were leading.

MR. HOMANS. I believe, though, if they were permitted to get together, and if they would get together, and the association could be controlled for the real purpose for which it was intended, that it would do much towards lessening the present loss.

MR. PARDEE. In other words, if they would not control the output so that they would make more money out of clear lumber, and let 2s and 3s and slabs go, and cut high stumps and long tops and all that sort of thing so much?

MR. HOMANS. Yes, and run the little man out at the same time. It is the little man that we want to encourage with the portable sawmill, because he is the one who is the loser.

MR. PARDEE. With the association you think they would let the little fellow go?

MR. HOMANS. I don't say that. I say, if we could get them together and control that association; methods of control as a rule have been rather disastrous.

MR. PARDEE. We haven't had much success at it so far. Then your notion is to tax the timber as a crop when it is cut and the land at a nominal figure, graded as grazing lands?

MR. HOMANS. Yes. I might bring that out perhaps a little clearer. Assume, for instance, that we were starting to-day with seedlings as the owners of cut-over lands must if they are going to raise a second crop; and permitting the intermediate yield suitable for telephone poles and railroad ties and miscellaneous material of that kind, which, after all, would only be selection cutting—permitting that, the real cutting, the heavy cutting, would perhaps take place, say for argument's sake, at the end of ninety years. Now, for the first fifteen years perhaps that land under present conditions might be assessed as cut-over lands, one or two dollars an acre. Now, at the end of the fifteenth year the assessor says, "This timber land, I am going to assess it as such," and while it is not very big at the same time it is growing very fast; it will not be long before it will be, and he can assess it perhaps five dollars an acre, and he continues to do that every single year for twenty years more. Now, the only increase between the fifteenth year and the twentieth year is the amount of wood that has accumulated. The owner has got nothing out of his present material. Under the present method they can so assess that that at the end of the ninetieth year there is absolutely no profit at all. I don't say they have done that or are doing it, but I say it is possible to do it.

MR. CUTTLE. How is it different from a man holding an unimproved lot or unimproved land?

MR. HOMANS. I think there is a good deal of difference there. The man who is holding unimproved property is usually holding it for speculative purposes, whereas here is a man who is raising a crop which is not yet marketable. It is not marketable because it is not accessible,

or it is not marketable because it is not mature. On the other hand, a man who is raising wheat, his crop is not assessed at the end of the third week, nor the second, fourth or fifth until it is matured. What he has in his possession on the first Monday in March is assessed, and so is the lumber after it is manufactured, assessed down here in the yards in San Francisco or wherever it may be.

MR. PARDEE. How about the railroad holdings that they got with the agreement that they would sell at \$2.50 an acre in parcels of not more than 160 acres to actual settlers, and have not sold any?

MR. HOMANS. I think that has been argued in the Supreme Court several times. I wish we could get those all back again. In the mean time for assessment purposes that is a question for administration, it seems to me. That is a condition which we must meet. Our trouble is the method of taxation.

MR. PARDEE. But if you had that method for all forest lands it would take in those railroad lands which we allege are being held illegally.

MR. HOMANS. I have the assurance of many tax assessors that the valuations will be raised this coming year, and that a great many lands in a few counties that I will not mention will be assessed as timber and not as grazing, as heretofore, as the result of a very superficial examination. I see no way of exempting property because of the method in which it is obtained or because of the method under which it is being held. We might try to secure legislation effective only in cut-over lands. By the time that timber is ready to cut, however, the timber lands at the present will be marketed, and then we are up against the condition again. If there is going to be any legislation on the subject, personally I would very much dislike to see anything that would strike other than at the problem itself.

MR. PARDEE. Leaving the courts to restore to us those lands of which they have ravaged us?

MR. HOMANS. It seems to me it is up to the courts to straighten out that problem. We are not responsible for the omission of that comma. I believe that is what the proceeding is about.

MR. PARDEE. That was done in the printing office. Has anybody any question to ask Mr. Homans?

MR. STANDISH. I would like to ask Mr. Homans if he classifies as to values grazing lands and brush lands and cut-over lands—if he puts them on the same basis? My impression was, when he was speaking, that he did that.

MR. HOMANS. In reference to reform in taxation?

MR. STANDISH. With reference to present conditions, we will say.

MR. HOMANS. No.

MR. STANDISH. Or reform, either?

MR. HOMANS. No. Grazing lands would be wholly separate from timber lands and brush lands; so-called brush land or chaparral is usually, in most of the counties, assessed differently; that is, assessed separate, I mean, from cut-over lands; it is a separate classification. In the southern part of the State it is classified as waste land, or chaparral, except where it is subject to irrigation. In that case it is assessed according to what its value might be, would likely be, when water was placed upon it.

MR. STANDISH. Then the cut-over land, do I understand that it is now assessed less than grazing lands?

MR. HOMANS. I could not answer that; I haven't my figures with me, and we did not go into that so very thoroughly. As a general proposition, however, the average for the State would figure out that cut-over lands would be higher than the grazing lands.

MR. STANDISH. Why?

MR. HOMANS. Because of forty-two different reasons; that is, according to the number of tax assessors we have. Each one has his own idea on that. There is no procedure governing it at all. It is left entirely to the county; no supervision, no control, no system, no anything—absolutely none whatever; and the assessors have absolutely no knowledge of their county at all, and yet are writing up the assessment roll every year and placing a value on it.

MR. JOHNSON. Under the present system of taxation the State has no interest in taxation of timber lands?

MR. HOMANS. No.

MR. JOHNSON. It does not get any part of it? It remains all with the counties?

MR. HOMANS. Yes. And the Board of Equalization, so far as I know, has no power to adjust any equalities between counties.

MR. JOHNSON. No, they are not interested.

MR. HOMANS. And the table which I have prepared really shows a rather serious condition, in a way, so far as equality is concerned. There is very little.

MR. MCARTHUR. Do the assessors in the different counties make any difference in assessing the tracts of lands that are being operated and those held for speculative purposes?

MR. HOMANS. Absolutely none. There, again, is where you find the great inequalities in the same county. Timber that is being operated and is now accessible on a railroad is being assessed the same as timber that is absolutely impossible to get at. In Siskiyou County, again, is an example of that—six or seven dollars an acre for the whole county.

MR. MCARTHUR. Would it not be a wise proposition to fix the basis of taxation upon timber that is being properly developed and that which was not? What I mean is, the land that is being utilized for the taking of the crop off, the mature timber, and that which is being really held for speculation?

MR. HOMANS. That, again, it seems to me, would be an administrative matter, rather than anything that could be an act of the legislature affecting the real problem in itself. Yes, I should say, if I was an assessor, I believe I would be inclined to do that under the present system. We have to remember, all the time, in this discussion, that the assessor is absolutely unfamiliar, generally speaking, with what they have and where it is.

MR. MCARTHUR. May I ask you what percentage of the mature timber dies annually, and also what the difference is, if any, between the increase in the growth and the loss from decay by age?

MR. HOMANS. In data prepared for the National Conservation Commission in 1908, it was found, as I say, through forest measurements in various parts of the country and others, as a general proposition, a virgin, matured forest, such as ours, the annual growth is just about

offset by decay, decay and natural losses, trees being blown over and effects of insects' depredations, exclusive of fire.

MR. McARTHUR. Then, figuring on the conservation of the forest, it will be a wise proposition to develop the whole extent of the forest and cut off the mature timber only. Then the increase of the younger timber would practically keep the forest up?

MR. HOMANS. All that forests need is good care, not only for productiveness, but to bring them in shape for future supplies. The amount of timber that is going to waste in the United States is simply enormous. It is little short of crime.

MR. BAUMGARTNER. Is there a very wide range of fluctuation in assessed valuations of property in the same class due to arbitrary action on the part of the assessors?

MR. HOMANS. Yes.

MR. BAUMGARTNER. They do not seem to confer with each other?

MR. HOMANS. No, but there is—

MR. BAUMGARTNER (interrupting). They have an organization?

MR. HOMANS. There is some association in the State, and all the assessors are members of that, and as a result of that, I will say that Modoc, Lassen and Plumas and Amador have practically got together and tried to adjust their differences; but that was merely because those particular assessors were interested in the problem and have tried to make things more equal, but there is no attempt all over the State. We could very easily find some concrete examples where taxes have been increased, on special properties, as much as 100 and 200 per cent. I think, if I am not mistaken, Mr. Standish, in Mendocino County, two or three years ago, there was a tremendous increase in the assessed valuation.

MR. STANDISH. Of timber land?

MR. HOMANS. Yes.

MR. STANDISH. There has been a continuous increase?

MR. HOMANS. Yes, sir; and in one particular year there was a very noticeable increase, and that is going to continue.

MR. STANDISH. Have you made any investigations as to the relative discrepancies in assessments of agricultural lands in the same counties as you have with the timber lands?

MR. HOMANS. No, we haven't gone far enough on that. We have just a few examples here and there, merely to indicate—and we try to select representative tracts—merely to indicate that there was a greater discrepancy between the assessed valuation and actual value of timber properties than many other forms, especially ranch properties.

MR. STANDISH. I thought you said you had made those investigations?

MR. HOMANS. I say we have taken just concrete examples, one or two, in different counties, which were pretty representative for that county as to agricultural land—not enough, however, to go into that phase of it.

MR. STANDISH. Then, really, you would be hardly prepared to say that there were not the same relative discrepancies regarding assessments of other property that there are on timber property?

MR. HOMANS. I feel pretty safe in saying that there is a greater discrepancy between the assessed and actual value of timber property

than other forms of real estate. In interviewing different assessors we found for the most part agricultural lands, real estate, and so on, were assessed for about 60 or 70 per cent of their actual value, whereas timber properties—and of course there is room for a great deal of argument and discussion as to the actual value of those properties—but according to their opinion timber properties are being assessed for from 20 per cent to 30 per cent of their actual value, that is, under this system of taxation, you understand; and we can find examples in this State where timber properties are being excessively taxed. There is bound to be, because of the method, especially when a man does not know what he is assessing.

MR. STANDISH. Then we should have a reform in the method of taxation of those properties rather than confine it to timber alone?

MR. HOMANS. I don't know as to that. I don't know enough about the other forms to discuss that.

MR. JOHNSON. Mr. Standish, you made some investigation lately in Mendocino County as to the relative assessing of timber lands compared with the relative assessing of agricultural lands. How did you find that?

MR. STANDISH. In Mendocino County, in about six years, the valuations of timber lands have raised 100 per cent; and so far as stripped lands are concerned they are assessed at \$2.50 an acre in that county, the same as good grazing lands that yield a revenue. Now, we get absolutely no revenue from stripped lands, and our deduction so far made in Mendocino County (and we are going at that pretty carefully, too), is that our timber lands are assessed fully as high as other classes of property; and so far as our stripped lands are concerned they are assessed excessively as compared with other lands.

MR. CUTTLE. You say timber lands have raised 100 per cent—you mean in actual value or assessment purposes?

MR. STANDISH. Assessment purposes. I will qualify that by saying 50 per cent to 100 per cent. Now, so far as market conditions are concerned the timber interests to-day are not nearly in as good shape as six years ago.

MR. CUTTLE. You mean the actual value of the land?

MR. STANDISH. So far as the actual value of timber that is accessible to-day, it will not yield the same stumpage that it would six years ago.

MR. PARDEE. I thought it was the reverse.

MR. STANDISH. Is that right, Mr. Johnson?

MR. JOHNSON. That is a fact.

MR. PARDEE. Mr. Homans, are you acquainted with this document at all: "A More Equitable Timber Tax"?

MR. HOMANS. Yes.

MR. PARDEE. What about it?

MR. HOMANS. With all due deference to Mr. Cornwall (the author of that pamphlet), who, I believe is interested in it, I feel that while that might be of value in smoothing out some of the high places in the administration of the present tax system, it does not assume that the problem is one of method rather than amount. That is my criticism in a nutshell. It assumes there, as I remember, that the difficulty with the present tax system is that taxes must be paid on property for which there were no returns, and in order to make it possible for the owner

of timber lands who is not in a position to pay the tax until the market is ripe for cutting, to hold his land and not be forced to cut. This gives them the privilege of holding that property by issuing deferred tax certificates, bearing 6 per cent interest, to be paid at the time the timber is cut; that in the mean time the land is assessed for a nominal valuation; and the author also provides that thirty, or sixty, or ninety days before the owner commences operating he shall notify the tax assessor, and pay up the deferred taxes at 6 per cent, and then any designated area will be released for cutting.

It does not go to the bottom of our trouble. I can see where under the present conditions that might be of value to some owners. In that connection I might say, however, that the summary of some five hundred inquiries sent out by the National Conservation Commission all over the country, asking to what extent, if any, the present method of taxation has influenced them in cutting, the replies showed—while many answers were rather vague and indefinite and some contained no information at all—the general opinion was that it had had practically no effect upon cutting; and that is one of the charges that is made against the present system, that it has by the premature cutting prevented the holding of cut-over lands for second crop, and resulted in wasteful methods. Now, from the data compiled it shows that while in some cases, especially in five states—Michigan, Minnesota, Washington, Wisconsin, I think, and California—while the assessed values are somewhat higher than in all of the other states, there may be some cases where they believed the present system had influenced their cutting; but that information was very vague and scattered, and not enough, it seems to me, to justify necessarily adopting that particular scheme; certainly not out here in California, although I see no objection to that; and the provision there is that it shall be optional with the owner whether he shall be taxed in that way.

MR. PARDEE. Mr. Johnson, what about the general proposition of taxation?

MR. JOHNSON. I will say that I am not informed; I haven't formed any definite idea on the matter. I haven't heard any very definite plan beside the present plan. I haven't read that article that Mr. Cornwall wrote and I want to read it, and no doubt will with profit; but I want to take a little exception to one thing Mr. Homans said about lumbermen wasting the timber, leaving high stumps and long tops and things of that kind. In the lumbering I know about in Mendocino County they don't do that; but they can't do it. The logging cost would be practically the same whether they hauled in the top long. They haul them in just as long as they can cut anything out of it that they can sell, because the logging costs about the same whether that log is left in the woods or not. That is even more true with the butt, because in the butt cut we get a little clear lumber out of that.

And I believe, too, that the timber land is assessed about in proportion to agricultural property. It is not always assessed according to the value that the lumberman puts on it sometimes when feeling pretty good, pretty optimistic, but that optimism is all right in future value and not intrinsic value.

MR. PARDEE. What do you think of this restraint of trade?

MR. JOHNSON. I am really sorry to have to confess that as far as

the redwood industry is concerned we would be very glad if there was a little restraint of trade, but we haven't been able to bring it about, and that by reason of a law that is far away stronger than the Sherman law or the Cartwright law. In my judgment to-day, if all the redwoods were owned by one man he would not get any more for it than he is getting to-day. He could not. It is the law of supply and demand that fixes the price, and the price of redwood anyway in California is controlled by the price of Oregon fir, Douglas fir, that is manufactured in Oregon and Washington. There are at least five feet of fir consumed in California to one foot of redwood, and for every purpose that redwood is consumed fir can be used. While, of course, we get a little higher price for our redwood it is absolutely without any joint action between us; but if we push that price a little higher, if there could be artificial action—and put the price a little higher, fir would take its place.

MR. PARDEE. What do you say on the question of saving the tops and the butts?

MR. JOHNSON. I do not know of anything that could make us save them closer than we do now, except an increased price, as Mr. Homans says, for some of this low-class lumber. Even there I do not see how we could get very much more out of the woods than we do now.

MR. ADAMS. Don't you think the stump would make very nice stakes for the ranchers if you cut the stumps a little lower down. Then the stumps would not destroy the range afterwards by burning three or four days.

MR. JOHNSON. We cut our stumps just as low as we can. If it is a high stump it is on some question of falling the timber, perhaps a gulch being there. I wish it were possible for the State Conservation Commission to make it possible to do away with this Oregon fir proposition, and do away with the Cartwright act and then amend another very important thing, that is, human nature; we might get the redwood people together and get a fair price for our cut.

MR. PARDEE. In the old days—we built our homestead in 1868. A few days ago I had occasion to add to it, and we tore off some of the sheathing, and we found it was very clear lumber; there weren't any knots in it at all; going over the house, we found it was built that way—seeming to indicate that clear lumber in those days was cheaper than it is now. Because in places there was no necessity for that perfectly clear lumber.

MR. JOHNSON. Statistics don't show that. I think we have some statistics of the prices of clear lumber in 1868. In the nineties clear lumber was very low.

MR. PARDEE. I was surprised at the absolute clearness in the lumber in the old house.

MR. JOHNSON. There has been no country, perhaps, where they have been so prodigal with clear lumber as they have in this State years ago, but not now.

MR. PARDEE. Mr. Standish, what about it—this taxation business?

MR. STANDISH. I don't think I can add anything to what has been said. I have no idea as to reform in taxation.

MR. PARDEE. You are not certain about this crop business, cutting it as a crop and taxing it as a crop?

MR. STANDISH. I am not sufficiently well informed as to desire to touch on it.

MR. PARDEE. You did not touch on that, either, Mr. Johnson?

MR. JOHNSON. It is so indefinite. Of course, it depends upon how much we are going to be charged when the crop is taken off. I think Mr. Walker has studied that matter up more than I have. I have kind of gone a little bit on the theory that with taxes perhaps the devil you know may be a little better perhaps than the devil you don't know, and we don't know how much we would have to pay as we cut off this timber.

MR. PARDEE. Do you know how much you have to pay now?

MR. JOHNSON. Yes.

MR. PARDEE. Next year?

MR. JOHNSON. No, we do not. But in California we know this: there is a principle established now, which is that all property is assessed somewhat in proportion to its value; and that one class of property in that way has to pay about its proportion as the other property. There is some system in it. We don't know what the other system would be. If it did not increase our taxes I think it would be all right. I think it might possibly tend to keep some people from cutting, especially people that haven't plants. That would be a good thing for the rest of us.

MR. PARDEE. Mr. Walker, you seem to be the expert to whom they all refer and defer on this matter of taxation.

MR. WALKER. Taxation is a pretty large subject for any one to try to take up offhand; but it does not seem to me that it is so vitally important as to the method of extraction of the money from the lumberman. He will eventually get back how much you extract. But it seems to me the first thing to be considered is whether you wish to provide any means for reforesting the lands. If you do not mean to reforest the lands, and merely want, when you come to the taxation of timber lands, to see how much you can get out of them, that is one thing; you had better go right to them pretty hard and get as much of it as you can before they get it all and the land goes back to the State; but if you wish to provide means for reforesting and allow the lumbermen—I say the lumbermen—allow some one, even the lumbermen or the State or Federal Government, to reforest the land, then the first problem you have got to solve is to make it a financial consideration to the lumberman to do that. There should be some incentive. There should be something in it. At the present time, and under present conditions, there is no money in reforesting the land. It is too long-winded a proposition. Just how that can be brought about is a matter that will bear a great deal of discussion. Naturally, the matter of taxation considerably impresses the mind first. It does not seem practical for the State or the Government to subsidize lumber concerns as they do shipping industries—I understand certain American boats under certain conditions are subsidized to encourage the American shipping. There might be such a thing as the State subsidizing the lumber concerns that will handle their timber in a proper manner to reforest. I anticipate that that will stir the animals up, so to speak. The other interests would object to donating money to the lumber barons, as they call them, so it would seem as though they could get at it by slacking away on the taxes a

little bit under present conditions, making laws, perhaps, that all lands cut under certain rules and regulations, similar to the rules and regulations of the Forestry Department, that such lands should be perhaps exempt from taxation, or assessed at a very nominal figure; anyhow, some scheme to make it worth while for the lumbermen to do it. It is not hardly fair for the people of the State to single out the man engaged in the lumber industry and expect him to come in and become a philanthropist for the benefit of the dear people. They ought to bring about a condition that will make it a business venture, make it worth while. The matter of taxes seems to be the most feasible method of subsidizing, so to speak.

MR. CUTTLE. Your idea being to tax the lumber as it is cut, as the crop is harvested?

MR. WALKER. Just how that would be brought about I don't know; but what I was getting at was to bring to your mind forcibly the condition that exists; that it is not a business proposition at the present time and under present conditions to start in to reforest a tract of land. You should devise some means to make it worth while to them to reforest it. Just what that scheme would be I am not prepared to say. A scheme was suggested this morning, partly by myself and partly by Mr. DuBois, whereby companies that cut their lands over in proper manner, leaving a fairly good stand of timber on the land for reforestation purposes, they could be reimbursed with an equivalent timber value from the Forest Reserve. That is another way it could be gotten at. It seems to me the most important matter to decide is whether you wish to provide some means for reforestation, and if you do you could help it a whole lot in the matter of taxation. It is a delicate matter for the lumber concerns to speak about; there are a great many people that say we are simply trying to dodge our taxes.

MR. PARDEE. I do not see that that cuts any figure here.

MR. WALKER. The woods are full of that kind of people.

MR. PARDEE. You cannot help that; that is a condition that you have to face, and here by all means you should have no delicacy on that point.

MR. WALKER. Our company is ambitious to handle our timber in a proper manner; and if any reasonable kind of a scheme can be devised that will make it worth while for us to do it, we will be only too glad to do it. It ought to be done, particularly in our section of the country, for the reason that the cut-over lands, let me say, have no other value, none at the present time, unless it is mineral value, which is not very likely, as it is a lava country. There is practically no agricultural value attached to the land, and most of it is rather high in elevation, and with the exception of a few local spots, it is not possible to irrigate it for crops. The nature of the land is such that I do not think it would pay. The land is good for nothing else. That makes it a little different from the redwood country. There you have agricultural possibilities.

MR. PARDEE. Haven't you evolved some sort of a scheme or notion of what ought to be done?

MR. WALKER. We have thought of it a good many—

MR. PARDEE (interrupting). I know that your father has.

MR. WALKER. Yes, has given the matter a great deal of thought and study.

MR. PARDEE. You have not formulated anything definite?

MR. WALKER. No definite scheme further than we believe, sooner or later, some practical scheme from some source will make it worth while to reforest the land, and we intend to go ahead and do it with that hope in view, but knowing that at the present time there is no incentive to do it.

MR. PARDEE. You believe it will be so necessary to do it that it will be done?

MR. WALKER. I think so. I think it is an absolute necessity that the State has got to meet in the course of time. It is just a matter of how long it takes it to wake up to that fact.

MR. PARDEE. Have you looked over this pamphlet? (Referring to Mr. Cornwall's pamphlet entitled: "A More Equitable Timber Tax.")

MR. WALKER. Yes, I read it over a couple of times, but I do not see where that pamphlet would relieve the situation any, except, perhaps, in cases (and I haven't any in mind) of people who have a tract of land and who haven't the ready money to pay their taxes. They can put off the evil day of paying the taxes until the time they begin to realize from the logs.

MR. PARDEE. And pay six per cent for the privilege.

MR. WALKER. Yes. I think they can go to any money lender familiar with the situation and borrow money to pay the taxes on the same basis as in that pamphlet. I would just as soon advance money to a man to pay his taxes and take a lien on the property, if I had money to loan. I cannot see where that bill would relieve the situation any. In our case we would sooner pay our taxes than have these certificates issued and scattered around; it would not do us any good.

MR. PARDEE. You can get money cheaper than that?

MR. WALKER. Yes.

MR. PARDEE. For the fellow who could not you think possibly that might be a solution of his pressing immediate difficulties?

MR. WALKER. Yes; but I haven't in mind any case where that would apply.

MR. CUTTLE. All lumbermen having an abundance of ready money on hand, I take it?

MR. WALKER. They have enough to pay their taxes.

MR. CUTTLE. In that respect they are different from orange growers sometimes.

MR. WALKER. I am not familiar with the orange growers. In regard to the waste that Mr. Homans spoke of, it has been my observation in a shingle country there has been a great deal of waste, not so much in high stumps but in long tops. It was due to market conditions. It wasn't worth while to this fellow to handle the upper log of low grade lumber, and he left it there in the woods.

There is a large area of country, of cut-over country anyway, where only a few logs come out of the trees. The trees were cut, and the best logs were cut out of the best trees, and the rest left there to waste. It was a very, very extensive waste. On lots of land they left a bad fire risk when you go there to-day. They are not to blame in a way. The conditions were such that they could not handle the lower grade lumber with a profit. It was not reasonable to expect them to haul that lumber out to the railroad and ship it at a loss.

MR. PARDEE. It is a mighty complicated matter then, this question of taxation so far?

MR. WALKER. It is.

MR. PARDEE. So many prejudices to be aroused, if not already aroused.

MR. WALKER. As to the classification of lands in the counties that Mr. Homans spoke of, I would say that I think it has been a failure in the counties that I happen to know of. For instance, in Lassen County, the classification cost the county five hundred dollars. It was done by a cruiser who came out from Minnesota in the interest of a lumber company that year in that territory. He could only make the most hasty kind of an examination. You can imagine a man, what he could do in a county to classify the lands for five hundred dollars; and in Modoc they paid two thousand dollars for their classification. It was done, I believe, by the county surveyor, at that time. He was not familiar with the land, he did not make anything but a most casual examination, and his examination in both of those counties was done more from plats of ownership, made more on that basis, than the relative value of the timber, resulting in entire dissatisfaction all around. We got in on the first rate of \$12.50 an acre, and the local people were assessed at \$2.50 and \$3.00 an acre.

MR. HOMANS. I think that is true in other counties.

MR. WALKER. The matter of examining the lands was gone into pretty extensively in Siskiyou County. They contemplated cruising all the lands in the county to get a more equitable assessment of the land; and they made application, I believe, to some of the Oregon counties that had examined the land to see if it had been a success; and I was informed at that meeting that Klamath County had made the cruise of their lands and found themselves in worse shape than they were when they started. The reports were very conflicting. Some lands that belonged to certain parties were assessed out of all proportion to the rest. It is a matter that the State ought not to go into, in my estimation, at all. To go into it as the counties have for five hundred or two thousand dollars to classify the lands of the county, they cannot get any classification that is anywhere near right. They cannot examine the lands for any such money. In that connection I might say that I have kept fairly close track of what it has cost us to cruise timber lands, and find it has cost us from twenty-five dollars a section up. Twenty-five dollars a section where we were doing the work, men working on small salaries, camping out, and working all the time so there is no lost time practically in moving ahead and getting from one place to another. The expense in counties would be prohibitive to the State. It would be absolutely out of the question on such a proposition as that. That is a little out of order at this time, but it is a matter that came up in Siskiyou County and which may come up with you before you get through.

MR. PARDEE. It is of interest because it has a direct bearing on the question.

MR. ADAMS. Why are the stumps left so high?

MR. WALKER. I cannot tell you anything about the redwood stumps.

MR. ADAMS. I mean Shingletown. I mean up there among your timber.

MR. WALKER. It was probably easier for the sawyers for them to saw in this position than to rub their knuckles in the tall brush.

MR. ADAMS. What is the great detriment to the forest by leaving the big stumps, in your opinion?

MR. WALKER. Just the waste of timber.

MR. ADAMS. Nothing else?

MR. WALKER. That is all I can see.

MR. ADAMS. Don't you think, when that forest gets on fire in the fall and the fire is put out, the big stumps will hold the fire for two or three weeks and start new fires?

MR. WALKER. It has never been my personal observation.

MR. ADAMS. I personally saw that.

MR. SIMONS. I don't think the stumps are left so high now as they used to be.

MR. ADAMS. I don't think so either, but they still leave them high. I want to say, I was in the forest in Shasta County last Friday or Saturday and I still saw them cutting the stumps that high (indicating). Before they used to cut them higher. They were cutting about three and a half feet.

MR. EVERETT (representing Pioneer Western Lumbermen). What is the exact idea of this conference?

MR. PARDEE. To elicit such information as we can get from people interested in forests in all its ramifications.

MR. EVERETT. For what purpose?

MR. PARDEE. To recommend such legislation as the Commission may see fit, under the act of the legislature authorizing and directing us so to do.

MR. EVERETT. Affecting the conservation matters?

MR. PARDEE. Yes.

MR. SIMONS. Our experience in the north has been, the cruising of the county is very unsatisfactory. You cannot get a force in the woods large enough to handle the proposition that is competent; and out of ten counties that have been cruised in the State of Washington there is only one of them that was of any value at all. One county spent over twenty thousand dollars in getting that information, and it is not in such shape that they care to expose it to public inspection at this time, simply because the men doing the work were not the proper men to do it. We find it costs from thirty to fifty cents an acre to put a cruise on the best of the land. It is not a proposition of a tape line, a pencil and a piece of paper. A man has to be a judge of timber and of logging conditions to know what timber to put in the cruise and what to eliminate. About 70 per cent of the cut on the Pacific coast is common lumber, and it is only about 30 per cent that can be shipped East, that is good lumber. Now, some of the mills are so located that they can dispose of their lower grades of lumber to advantage on account of the local demand for it; but the companies operating back that haven't got a local trade have to leave a lot of it in the woods. It means they have got to be able to sell more of the common lumber. We haven't been able to ship it East, and that is where we have got to sell it to sell the quantity we are producing. We cut a log in the mill and you spend

as much time getting out the common lumber as the clear lumber, and it costs you as much per thousand. There has not been a time with the exception of 1906 and 1907—that was not new in regard to San Francisco—that you could not buy common lumber below the cost of production somewhere on the coast. I believe the average price of selling lumber to cargo mills was about \$11, and it costs from \$8 to \$12 to produce that lumber.

MR. CUTTLE. How do you mean to produce it? How much of that is value of the stumpage?

MR. SIMONS. About sixty to seventy-five cents.

MR. CUTTLE. The balance is the cost of getting it out to the vessel?

MR. SIMONS. Yes, sir.

MR. PARDEE. Now, Mr. Cornwall, defend yourself.

MR. CORNWALL. I will say, Mr. Chairman, that your secretary is responsible for my being here and also for what I am going to inflict on you. I also want to say that the conditions which obtain in Washington, Oregon, Idaho and Montana, and especially in the states of Oregon and Washington regarding the taxation of timber lands, have become very acute, and I am sincerely glad that my good friend Walker finds himself in that splendid condition where he brooks no delay, either in the payment of taxes or his ability to pay them; so what I have to say will have no bearing on my friend Walker.

I will now read to you what I have in mind. The great characteristic of newspaper men is that we can probably write better than we can speak; and I will say in relation to the views contained in my paper it was at the suggestion of a very large timber owner in California, who asked me if I could possibly devise some plan which might lighten the burdens of taxation in this State as well as in Oregon, and having been the father of the original bill which provided for reforestation he thought he would come to the same source. (Mr. Cornwall thereupon read the following paper.)

TAXATION OF TIMBER LAND.

By GEO. M. CORNWALL,

Editor of the *Timberman*, Portland, Oregon, before the California State Conservation Commission.

A timberman of large holdings in the Northwest expresses the composite opinion of many other owners in their relation to the burden of tax borne by timber, in the graphic statement that he is "always just two jumps ahead of the sheriff."

At the extreme opposite end of the question is the sentiment of the general public, which is crystallized in their term of opprobrium "timber baron," as expressive of their mental attitude toward the owner of large timber bodies.

Somewhere between these antipodal points of view there exists a middle ground, that when found will insure an equitable adjustment of the necessary burden of taxation, harmonize conflicting convictions, and bring about a cessation of hostilities. But the end is not yet.

In the meantime, it is obvious to any one who has given the matter even a cursory study, that the public has a misconception of the status of the entire timber tax problem, and of the cumulative burden resting upon the timber owner—a misconception that, in effect, approaches very near to a catastrophe. And yet public opinion is a resistless tide, in whatever direction its current may be set—and it has either to be stemmed or else allowed to sweep all opposing it into the maelstrom of socialistic doctrines and pressure through legislative channels. The public is like a schoolboy that is too big to be chastised—and knows it. It has learned its lesson of

Vox populi, vox Dei, and the part of wisdom lies in directing its strength and educating it out of its misconceptions; for it cannot be coerced.

The force of this has been brought home to the timber owner, partly in the fact that the tax on his timber has gone up by leaps and bounds within the past few years.—an average increase in Washington from \$4.88 per acre in 1905 to \$13.59 in 1910—an increase that has been due in considerable measure to the pressure brought to bear by the conviction existent in the public mind that timber has not been bearing its just share of the tax burden. That this is the main point of the question on which the public needs to be educated is proved by the demonstrable fact that, instead of timber not bearing its fair share of taxes—in reality, at the present increasing assessment and rate, and under the system of levy and payment now in vogue, privately-owned timber would, within a comparatively short period of years, be practically confiscated. For the unthinking part of the public fails to take into account the fact that the present system of timber tax operates as a cumulative tax, paid year after year upon a crop that can be harvested but once.

Hence, whether timber lands are over-assessed depends on how long they are held. An instance in proof of this occurs in the case of a man who, twenty years ago, bought a quarter of a section of timber in Washington, with the determination to hold it. And he has held it—but the experience has cost him during that period, in accumulated taxes and interest charged to investment, a sum exceeding \$44,000.00.

These are the things that the public does not know, and that it needs to be taught. It also needs to be shown that timber bears a relatively higher tax than does agricultural land, the ratio of assessed to true value being, in the State of Washington, approximately an average of 35 per cent for timber land, 28 per cent for farm land, and 46 per cent for city property; but ranging from 8 per cent to 77 per cent for timber, and 14 to 92 per cent for city property, with an average rate on timber of from approximately $2\frac{1}{2}$ to $4\frac{1}{2}$ per cent; agricultural lands, $1\frac{1}{2}$ per cent to practically 4 per cent; and logged-off land, $2\frac{1}{2}$ to $4\frac{1}{2}$ per cent.

All admit the necessity for some sort of taxing system as the only legitimate means of raising revenue to maintain local government and public utilities, such as schools and roads. But the questions at issue in the matter of timber taxation, and probably always will be, are the amount, form of assessment and manner and time of its payment.

Investigation involving ownership of nearly three and one quarter million acres, or nearly 55 per cent of privately-owned timber, was undertaken in the State of Washington with the object in view of ascertaining the actual burden of taxation on timber land in comparison with that borne by other forms of real property; the effect of the present system of taxation in the management of forest lands; and to determine the need for corrective legislation.

The first fruits of this investigation were the following ascertained facts:

1. In 1910 the timber lands paid nearly two and one quarter million dollars, or about eight and five-tenths per cent of the taxes. In that year the tax on forest lands was about forty cents per acre for the entire state and about fifty cents for western Washington alone. The tax per thousand feet board measure, for the State as a whole, was a little in excess of one and twenty one-hundredths cents, or about one and one fifth cents per thousand.

2. The burden placed on the same class of real property of equal value is not uniform on holdings in the same county or holdings in different counties.

3. The burden of taxation on timber land is greater than on agricultural land, and less than on city property.

But when the whole question is summed up it is not so much the amount of tax as the general system in vogue that is found so unsatisfactory, with its resulting inequalities in mode of assessment and cumulative form of payment, productive of continual "fightings without and fears within." So far as concerns the system itself, the general property tax has for years and generations been obsolete in the leading European countries, some of them having for a century or more had in operation the system of an annual tax on the land, to furnish definite revenue, with a yield on the timber when cut; as it is recognized that to exact an annual tax from the timber from which there is no income until it is cut is to work a hardship on the owner.

In regard to the inequalities of tax assessment: There is manifestly something radically wrong with a system that places the tax-assessing power in the discretion or whim of a single individual. It is too inherent a trait of human nature to be swayed in its judgments and decisions by prejudice or self-interest. Any one can

furnish illustrations of this from his own observation. For any one who cannot, here is a concrete example: Ownership of a section of timber land in an Oregon county and the office of assessor of that county happened to be merged in the same individual. By which combination of circumstances it strangely happened that that particular section of timber land was only assessed at about one third the value of equal acreage adjoining it, and of exactly the same character and stand of timber. Another instance of the inequalities of tax assessment under the present régime is furnished by the fact that some timber in Oregon pays a tax of \$1.75 per acre.

If there were official figures available for Oregon they would undoubtedly reveal many more such discrepancies, as do the statistics for Washington, which have been more fully compiled. The same would doubtless be true, also, of California, as well as the other Pacific coast timbered states.

It is a tendency of the American people in relation to their timber to "cut in haste and repent at leisure"—a tendency that the present confiscatory tax system will in no wise reduce. And as a first essential step toward the ultimate end of reforestation and placing the forest system of our country on a commercial basis in perpetuity, an equitable and stable tax system is the pivotal point. Authorities all seem a unit in the conviction that the yield system of timber tax is the final solution. But as the heavily timbered sections of the Pacific coast states are dependent almost entirely for their revenue on the tax from the standing timber, only the gradual adoption of the yield plan of taxation can be considered practicable. The innovation may be brought about through applying it first to the reforestation of cut-over lands, until the end of the forty-year period, when the young timber would begin to bring in a revenue to the state through becoming taxable, at which time the mature timber could come in under the yield tax system.

As a middle ground between the present system that is admittedly so universally unsatisfactory, and the final consummation of the yield tax plan, when its application shall have become feasible, the writer outlined a substitute taxing system, which has been given some publicity and created some discussion. Briefly, the plan contemplates simply an addition to the present method of taxation. The election of the system to be optional with the timber owner, conditional upon acceptance by the state. Its salient features are:

1. Creation of non-operative timber zones, which should include timber lands not required for immediate operation.
2. Assess the timber and the land in the non-operative zone separately.
3. The land tax to be imposed and collected by the county annually.
4. The timber tax to be imposed annually and deferred timber tax certificates bearing five or six per cent interest issued against the timber.
5. Interest on deferred timber tax certificates to be collected annually in the same manner and at the same time that the land taxes are collected.
6. The deferred timber tax certificates to be a lien against the property.
7. In case of fire destroying the timber upon which deferred timber tax certificates were issued, the county will guarantee the payment of the principal.
8. When the owner desires to cut the timber he must first notify the county tax collector sixty days prior thereto, and pay all accrued principal and interest due on said lands before commencing operations. The county to release such units as desired.
9. The timber to be reassessed every five years.
10. The present provisions in the law regarding delinquent taxes to apply under this system.
11. When the timber is cut, the land, upon the payment of the assessed valuation, plus the taxes and interest, reverts to the State. As an illustration, assuming that the land is assessed at \$2.50 per acre, with a levy of twenty mills, the annual tax would be five cents per acre. The appended table shows the amount of this tax with interest compounded annually at six per cent for a period of forty years.

Number of years.	Tax and Interest.	Number of years.	Tax and Interest.
1	\$0 053	21	\$2 11
2	109	22	2 29
3	168	23	2 49
4	231	24	2 69
5	298	25	2 90
6	369	26	3 13
7	444	27	3 37
8	524	28	3 62
9	609	29	3 89
10	698	30	4 18
11	793	31	4 49
12	894	32	4 81
13	1 00	33	5 15
14	1 11	34	5 51
15	1 23	35	5 90
16	1 36	36	6 30
17	1 49	37	6 73
18	1 63	38	7 19
19	1 79	39	7 67
20	1 95	40	8 19

The manifest advantages of this system are :

The county receives the annual tax on the land, and through the sale of the deferred timber tax certificates, also the principal of the tax on the timber.

The timber owner is not compelled to cut his timber regardless of physical or market conditions to prevent practical confiscation.

The state is assured the acquisition of the land for reforestation or agricultural purposes, at a fair and predetermined price. The lands best adapted for cultivation could be sold for homes and the rough, broken, mountainous land utilized for reforestation purposes. In order to insure to the state a sufficient and workable area of land, either from the standpoint of agricultural exploitation or reforestation purposes, the acceptance of lands offered being to provide the state with tracts of sufficient area to justify the administrative costs. The grouping of lands might consist of an aggregation of contiguous small units or a large body under single ownership.

Mineral rights should be reserved to the state.

The method of timber taxation in British Columbia embodies the above ideas and has produced excellent results.

Taxation of timber should be as nearly uniform as possible throughout the State, taking location, yield and quality into consideration.

This outline is given merely as a tentative suggestion, in the realization that the tax equation is in a formative state and must require time for the working out of its detailed problems: but realizing, also, that there is profound dissatisfaction with the present inadequate system, of which cognizance must be taken.

I want to say that the figures given are the result of a compilation by the University of Washington, which set to work through its department devoted to lumbering to find if possible something in relation to the taxation of timber land in that State.

MR. HOMANS. I might say that Professor Fairchild of Yale is considered, I believe, at present the authority in this country on taxation. He has devoted a great deal of time to that, and the summary of his investigation is practically that the taxation on yield offers the only practical solution of the problem, and I am under the impression that he has been working on the subject more or less for a great many years; and he believes that either one of two solutions is practicable: The separating of the timber from the land for purposes of taxation—a sort of half-way measure, a compromise, which should result in more equitable taxes; and the other—the one which he prefers and hopes will be

adopted—being, as was brought out before, an annual assessment on the land and on the timber when cut. He has given that very serious consideration.

MR. CUTTLE. Has he any solution of the problem as to how counties are to exist who are dependent on the taxes derived from timber lands for their revenue?

MR. HOMANS. No, he does not. He merely says there is a certain condition which must be met, and meeting that, someone will necessarily suffer as in introducing any other reform.

MR. PARDEE. As a timber owner, Mr. Walker, you are not interested in this question; but as a citizen you are: What would be the condition up there in Modoc and Lassen counties, where you have your large holdings, if this thing were to go into effect and the revenue of those counties were to be suddenly cut off? What would happen to those children who do not get too much schooling the way it is?

MR. WALKER. They would have to go on the same basis that they did before timber buyers came into the counties.

MR. PARDEE. There were fewer children, were there not?

MR. WALKER. I don't think the population of those counties has changed materially. I don't think the number of children has increased.

MR. PARDEE. Then they would have to go back to the state of barbarism where they were.

MR. WALKER. They would have to reduce their expenses. The matter might be gotten at by placing the cutting tax under state control, and allow the State to distribute its pro rata on about the same basis as it is being collected now by the various counties.

MR. PARDEE. The State distribute most of it.

MR. WALKER. I mean this tax that is collected on the timber that is cut. Let the State collect it, and cut it up into short lengths, and send it out to each one of the counties in about the same proportion that they are collecting tax from timber lands at the present time.

MR. PARDEE. Some of these counties are already in this position—or were a while ago: The law allows them to put a tax of fifty cents on each one hundred dollars valuation for school purposes. That is the maximum. I found on looking it over when I was in Sacramento that some of the poorest counties in the State were assessing themselves the maximum for their schools and they had mighty poor schools at that. San Francisco was assessing itself six cents on the hundred dollars' valuation, and had magnificent schools; Alameda County had about twelve cents and had good schools; and these poor little backwoods counties had no schools, or practically so, although they were assessing themselves the maximum the law allowed; and I had the greatest sympathy with the children who were going to school only a few months in the year and under the most adverse circumstances and conditions; and we took the matter in hand and regulated it in a way; but those are the things I am always thinking of in regard to this matter of taxation over in those counties. I can remember the time when Dr. Glenn owned the big ranch up there which is now Glenn County and where there were no schools at all, you know, because there was nobody living there and the few children that were there had no school facilities at all. We have got to look out for that kind of thing. It is most important for the

future of the State. We are going to get a crop of real socialists and anarchists from this very thing. We haven't talked the matter over in the Commission at all, but it seems to me that kind of conservation is a thing we are all vitally interested in and must take care of in some way. I do not think this commission can do it, but it is a question that we all ought to have in mind for the immediate future, and certainly for the advance future of this State and its property and its people, and its conditions. Let me add to that this question of taxation has never come up before the Commission; it has never been discussed; we are wedded to no proposition at all or any of the views that have been discussed here. We are groping in the dark and asking for information, and that is why I am so insistent on you gentlemen telling us what you know and what you think and what I think you ought to know and what I think you ought to think, and so I hope you will not have any hesitancy in telling us what you think.

MR. WALKER. In Modoc County it would work quite a hardship. According to my recollection now we are paying about one fifth of the taxes of Modoc County; and there are other large holdings there which would probably bring them up to a third. In Shasta County we are paying about an eighth. It would not cut so much figure there as they have a great deal of other property on the roll.

MR. PARDEE. Twelve and one half cents cut off would make a whole lot of difference.

MR. CUTTLE. What per cent of timber in the county pays the taxes, do you know?

MR. WALKER. I could not tell you that; I had those figures once, I do not recall them now. In Plumas County it would be quite high.

MR. PARDEE. Could you get them for us anonymously or otherwise so that we might have that?

MR. WALKER. I haven't them in good enough shape to offer for record. I think Mr. Homans would furnish that.

MR. PARDEE. Could you get that for us, Mr. Homans?

MR. STANDISH. I think many lumbermen think there is no necessity for any radical change in the method of taxation; and I think also that many lumbermen believe also that the crop of timber that is being harvested should bear possibly a higher rate than that crop that is too far back to be available for years.

MR. PARDEE. That is, you mean in situation?

MR. STANDISH. Yes. What we are facing to-day is this continual raise in the assessed value of the land, and it will soon come to that point, if it continues, where it will be a serious matter. I do not think that the timber men to-day object to the taxes as a rule that they are now paying; but it is the uncertainty as to what the next few years will bring forth, judging by the percentage of raise that has come in the past few years. It is that uncertainty. Now, we know this, that in other districts of the United States—I have in mind particularly that district that is known as the Chippewa district in Wisconsin—there were several counties there that got into the control of people who became smitten with the desire to make improvements to be paid for at once, and the larger part of the property was owned by the timber men; it was timber land. Those taxes were raised so high that in self-defense a large section of that northern part of the State was cut off; and the result

of that is that to-day the land can be assessed at only a fraction of what it would have yielded had they not hastened the removal of the timber. Now, I do not see the necessity for putting timber lands back in value simply to cut-over land or brush land; I do not think the timber owners ask anything of that kind; but they do ask something between; and the fact that the timber is not a crop that is available and will yield a yearly income, and that no revenue can be gotten from the lands—I think that fact should be taken into consideration—

MR. PARDEE. The practical difficulties in the way are very great, of course, that is, that the assessor has no particular knowledge or expertness in regard to those things; that he is elected, not by the timber barons, who have very few votes in the county, but by the great mass of the people who are living there. He of course is more or less prejudiced against them—and those are the practical difficulties in the way of arranging it. It always seemed to me that the Supreme Court of this State made a great mistake when it took away from the State Board of Equalization the right particularly granted in the Constitution to equalize assessments in the counties. The State Board of Equalization would not have been up against those local prejudices and those local conditions, and it ought to be allowed and the State Constitution said it should be, to go into the counties and regulate assessments within the counties. I can readily see why that thing as it was intended to be was of importance in that matter.

MR. STANDISH. I think theoretically that is right, but practically I think I should rather depend for equality and justice upon knowledge among the people, among my own neighbors, among the people where we own lands, than with the men upon the State Board.

MR. PARDEE. You are right there with them, you know them, you are of them, too; but take Mr. Walker's case as a concrete example, or the Weyerhausens, who are not in the State at all, and have no intimate connections at all with its people, don't Bill and George and Jim them, as they meet them on the road as you do up there. There conditions are very different. You don't have to pack a gun when you go up there. I know some fellows when they come into this State practically have to do that, and the situation is very different under those conditions. You see where I am heading and what I mean—the difference between your situation and the other fellow's. I am not protecting the other fellow at all. He is able to take care of himself; in fact, I am rather against him on general principles; but he has, of course, some rights that we are all bound to protect; and the State Board, it seems to me, would be more apt to protect that fellow than the local assessor; but it is a muddle and I do not know how to do it—I remember what Mr. Johnson said as to that: He did not fear the ills that he has because he fears some others that he knows not of. That was his particular reason for not advocating any change in the assessment conditions; but I am free to say, speaking for myself as a member of this Commission, I do not know a thing about it, and I had hoped you gentlemen would. You have given us a good many ideas I am sure—given me a good many; but there has not been anything very concrete from you, except just to let it alone; and that doesn't seem to be the thing either, because so many other fellows say: "No, don't let it alone"—the foresters, the fellows who have written books on it and who have made

speeches and addresses on it, they say: "Don't let it alone"—all the college professors and all of the State Foresters and all of the theoretical gentlemen from the United States Forestry Service, they all say, "Don't let it alone"; and the timbermen, most of them; apparently, say, "Do let it alone." Now, we are torn between those contending emotions, at least I am.

MR. HOMANS. It seems to me that it is desirable to do something before the timber owners themselves say, "We must do something." There is no assurance of what will be done in the future under this method; and it has been a fact all over the country that as the needs (and I am speaking now from data that has been compiled on that)—it is a fact all over the country that when the needs of the different counties have increased the first property to be raised for the purpose of assessment is the timber property.

MR. PARDEE. Very naturally so, too.

MR. HOMANS. And that has been done too, because in many of the states that has been very light and is light now. California and four others stand out quite by themselves as bearing higher valuations than any other of the others. There is coming a time when a further increase is really going to have an appreciable effect upon cutting.

MR. PARDEE. Under those conditions, Mr. Standish, do you think we had "Better bear the ills we have, than fly to others that we know not of?"

MR. STANDISH. I am in hopes that the counties will regulate those matters pretty well. I have great ideas of what education will do. Now, I think that the troubles of the timbermen have been largely on account of the conditions being known to but very few people and I think that those conditions are getting better known; and with the result—now to get back to our own personal interests again—I think in Mendocino County, I do not think that the ranchers or stock men in Mendocino County desire us to bear any more than our share of the burden, but I do think they have had erroneous ideas, and we are going to try to disabuse them of those ideas and are going to try to do it, not simply by making the assertions but by showing them the figures. We have great hopes for that.

MR. PARDEE. That is reasonable and rational, too. Has anybody else anything to offer? Mr. Charlton, have you got anything to say about it?

MR. CHARLTON. No, but I would like to ask Mr. Homans if, gathering the statistics, he knows of any discrimination against the non-resident owners in the assessments?

MR. HOMANS. No, the figures would not show that. They would show it in the manner that Mr. Walker has pointed out, in those counties where they have classified the timber it is very true, in many cases, that the absentee owner falls in the first class almost invariably; but I haven't figures even there to back that assertion up. That has come from the tax assessors, their own general knowledge of how they tax the property.

MR. PARDEE. I have talked to some people about that—not all assessors—and one reason given for it by one sharp old mountaineer was that they did not spend any of their money there; that they were not buying whiskey and tobacco and beans at the store; they were

spending their money at another place and, therefore, on general principles, got it out of them in the way of taxes.

MR. WALKER. We have spent quite a little money in five counties in the last few years. We spent all we had.

MR. ADAMS. I would like to ask you a question. Did you folks have your lands when Ludwig was the assessor in Shasta County? He was the assessor there before this one.

MR. WALKER. I could not say.

MR. ADAMS. Do you own your lands about seven years?

MR. WALKER. Some of them about twelve or fourteen years.

MR. ADAMS. I don't mention any assessors' names, but I did hear one assessor say that they would attend to Walker's case in making the assessment. What he meant by that I don't know, but I think he meant to put the assessment away up.

MR. WALKER. He has attended to our case, all right. It might be well to bear in mind the attitude that the Government has taken in tax matters in creating the forest reserve. In order to handle their reserves satisfactorily they have deemed it necessary to withdraw their lands from taxation altogether. They pay no taxes.

MR. PARDEE. That is a matter of pure conservation.

MR. HOMANS. That has been done, but they give to the counties twenty-five per cent of the total receipts for any purpose in that county. Whether or not that really offsets the taxes as the timber is assessed now, I do not know.

MR. GLAVIS. They might increase that payment to fifty per cent, and that might overcome the burden upon the timbermen who are paying a tax, and at the same time trying to conserve the timber.

MR. HOMANS. There is one other matter which, if it has not been brought out already, it seems to me is closely associated with the question of taxation; that is, the manner of handling cut-over lands that have gone for taxes. We have something like half a million or more acres in this State, and as I remember the provision of the law now, it is that those lands shall be sold either at auction or not to exceed a certain price when an application is made for them.

MR. CUTTLE. After five years?

MR. HOMANS. Yes. And then in connection with that there is also a question, perhaps, of devising some policy by which the State would acquire the cut-over lands, either through deeds from the owner, providing the State will carry out a certain agreement with reference to reforestry—

MR. PARDEE. That was touched upon this morning.

MR. HOMANS. It was?

MR. PARDEE. I know nothing more. I am speaking for the Commission. I am very much obliged, indeed, and the Commission is, to all you gentlemen for coming here; and I hope you will bear this in mind: If there is anything you think the Commission ought to know, I wish you would sit down and write up a note. I am a great believer in the butter-in. This is a matter of great interest to us as officials and to you as individuals and owners of timber and things generally that can be conserved. We are all interested in the conservation of the thing that the other fellow has, and we are also interested somewhat in the conservation of the thing that each one of us has; and I sincerely hope that

you gentlemen will have no hesitancy whatever in writing us and telling us what you believe ought to be done in the way of conserving these things, either your own things or the other fellow's things.

We would be glad to have you do it, and if there be nothing further we will stand adjourned.

Thereupon the public meetings of the Commission adjourned.

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