



(2) Evidence recorded on the 14th April 1927 :—
 Introductory—Chemicals—Timber—Labour—Power—
 Market and prices—Equipment—Capital account—De-
 preciation—Interest on working capital 288

(3) Evidence recorded on the 16th April 1927 :—
 Introductory—Agent's commission—Manufacturers' pro-
 fit—Claim for protection—Levying an excise duty—
 Organisation of the Swedish Match Company—Capital
 —Subsidiary companies—Sales organization—Capital
 and control of policy—Policy with regard to India—
 The Western India Match Company—The Burma
 Match Company—Selling agreements—The publication
 of costs and evidence—The clearing of stocks 318

11. Conservator of Forests, Assam—
 Evidence recorded on the 24th June 1927 :—
 Introductory—Note on match woods—Match wood within
 reach of the Assam Match Company—Plantations—
 Location of the factory—Extraction of timber—Storage
 of match timber—The Assam Match Company's lease
 —Departmental working of the forests—Lease condi-
 tions—Transport to Calcutta—Plantation of Bombax—
 Concessions to persons of foreign nationality—Total
 supply of available match wood 356

Press Communiqué.

In accordance with a Press Communiqué issued in July last, the Indian Tariff Board now publishes the written evidence and part of the oral evidence recorded in connection with the enquiry now proceeding into the Match making industry in India. The evidence consists of two volumes, Volume I containing the representations received by the Indian Tariff Board together with the questionnaires issued and the replies thereto and Volume II containing the oral evidence recorded upto the 24th June, 1927, by the Indian Tariff Board, and can be obtained from the Manager, Government of India Central Publication Branch, Calcutta, or all Provincial Government Book Depôts and authorised booksellers, price Rs. 2 or 3s. 6d. per volume.

C. B. B. CLEE,
Secretary, Tariff Board.

CALCUTTA,
The 20th January, 1928.

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MESSRS. ADAMJEE HAJEE DAWOOD AND COMPANY, LIMITED.

Evidence of Mr. M. A. BAWANEY recorded at Rangoon on Monday
the 21st March, 1927.

Preliminary.

President.—Before proceeding with the evidence I should like to explain to you the scope of the Tariff Board's enquiry into the circumstances of the Match Industry and to place before you some of the more important points into which we have to enquire because, on reading some of the replies, from the applicants, I find that they have not fully grasped the lines on which the enquiry is to proceed. .

We are opening our enquiry in Burma for the reason that there is some evidence that Burma has very rich forests from which large quantities of suitable wood may eventually be made available for the use of the Match Industry. This province has also another advantage in that Rangoon is a port connected by rivers with the forests and therefore has the advantage of being able to secure its wood by water, to obtain its imported raw materials by sea and of being favourably situated for the export of its finished products to other parts of India, or, it may be, to other parts of the world.

Now, as regards the scope of the enquiry, you must have seen the Resolution issued by the Government of India on the 2nd of October. We followed it with our own Communiqué, dated the 29th November, 1926, in which we explained to the applicants briefly what was required of them. The first point that we have to consider is whether this industry is one which has a good case for protection, that is to say, whether it fulfills the conditions laid down by the Fiscal Commission. The principal conditions are enumerated in paragraph 97 of the Fiscal Commission's Report. But there are other considerations by which we are also to be guided and which have been mentioned in the Communiqué as well as in our previous reports. If we are satisfied that those conditions are fulfilled, then we have to consider what measure of protection should be given and the form it should take, that is to say, whether it should be merely by the imposition of duties or the grant of bounties, or by means of both, or whether it should be in any other form. In order to determine that we have first of all to ascertain the price at which the foreign article competing against the domestic article—in this case matches—enters the country. Then we must ascertain the fair price at which the Indian manufacturer can afford to sell the article. In determining the fair selling price we have to ascertain what we call the works costs, that is to say, all costs incurred in the process of manufacture; then to that we have to add certain other charges, e.g., depreciation, agents' commission and so on, and on top of that what we consider ought to be a reasonable return on the capital invested. When we have arrived at the fair selling price, if we find that this price is higher than the price at which the foreign commodity enters the country, then the difference between the two prices is what we consider the measure of protection necessary. The points I would like to impress upon you are that when we are dealing with the question of cost, you must give us all the information that we might reasonably require and that up to now we have always insisted that such information should be published. Of course, we do not insist upon publication merely for the sake of publication, but our proposals must be based on facts and they should be supported by arguments based on those facts. Our proposals then go up to the Government of India who have also to examine our proposals with reference to the facts. So, they also must know the facts. Then, these proposals cannot be made effective except by legislation. That means the proposals have to be examined by the

legislature of the country. Obviously, the legislative bodies would like to know whether the recommendations are sound having regard to the facts on which they are based. It is therefore to the advantage of the applicants to assist us in every possible way, and I do not think you can assist us better than by giving us all the facts and allowing us to publish them. Of course, if there is any secret process for instance, then perhaps you may be justified in claiming privilege. But I would strongly advise you that it will be to your advantage to allow us to publish all the facts. If you do not, we cannot reasonably make any recommendations and if we do make recommendations we cannot support them in a way which would be acceptable to the Government of India and the Legislature. That is as regards the question of protection. This enquiry will, however, extend much further than the mere question of protection because there are special circumstances to which I shall presently refer. Now there is some evidence that since these revenue duties on matches were increased, a certain number of factories have come into existence which have created more or less what we might call vested interests and even if we find that the match industry does not qualify for protection we have still to enquire into the extent of these vested interests and to see whether, apart from other considerations, the vested interests that have been since created are so strong as to justify the continuance of the duties which were imposed for revenue purposes. I don't think that this Board can take into account any vested interests which may have been created since the 2nd of October, 1926, when the resolution of the Government of India was published. If interests existing before that date are extended or if new interests are created, then the parties must take the risk because it is perfectly obvious that no new interests can be allowed to be pleaded as a reason for the continuance of the revenue duty at its present figure if they have been created since the issue of the resolution by the Government of India and I wish all parties interested in the manufacture of matches at present to understand that if they extend their interests in any way during the course of these proceedings, they will have to take the risk necessarily implied in such extension. As regards their investments prior to the 2nd October, 1926, we shall have to take them fully into account. Naturally I do not suggest that necessary investment of capital in order to make effective the concerns you have already brought into existence should not be undertaken but that any new large investment made merely for the purpose of being able to say afterwards "we have vested interests" in this industry is not permissible, and will not ordinarily be taken into account by the Board.

There is a further point which I should like to explain that is that this duty was imposed for revenue purposes. Now as you produce more and more matches in the country, obviously the revenue decreases. We have, therefore, to consider whether, if the Government contemplated the retention of this revenue, some means should not be devised by which without interfering with the legitimate expansion of the industry, it should be made available to the Government. Matches are articles of common use and the consumer by reason of the revenue duty has been paying a slightly increased price and it is for us to consider whether Government should not continue to levy this small tax on the consumer in this or any other form so that Government can secure to itself a reasonable amount of revenue from matches. If the manufacture of matches takes place on a large scale in this country, then the import revenue will diminish or may vanish. Therefore, we have to consider whether eventually some other form of taxation should not be devised. It may take the form of an excise duty on domestic production, or it may take some other form in order to enable Government to get a certain amount of revenue, and we should be very glad if applicants would tell us the best way of securing to the Government a certain amount of revenue if and when the revenue from the Customs diminishes or vanishes.

But there is one more serious aspect of the case to which I should like to refer. Nearly every representation of any importance that we have received has suggested to us that since the increase in these duties a foreign trust has been operating in India as well as in other parts of the world. I am expres-

sing no opinion and I am referring only to an allegation which has been made. I may tell you that we express no opinion except when we publish our report. Our opinions are expressed in the report alone and if there is any statement which sounds to you like an expression of an opinion, you must take it ordinarily as the opinion, if it is an opinion at all, of the individual member of the Board or that it is merely put in that form in order to elicit more information. You must not assume that it is the opinion in a final form of either the individual member or the Board. It has been alleged in this case that the object of this foreign organization, which is sometimes described as a Trust, is first of all to enter into competition against the Indian manufacturer by itself manufacturing within the Tariff wall and thus by suppressing rival Indian firms either by excessive price reduction or by absorption into the Trust, in the end to secure complete control of internal manufacture. The Trust is said to possess a very large amount of capital, to be very well organized and to have large resources so that provided the trust really was in existence and if it operated, it would ordinarily succeed in competing very effectively—succeed anyhow in keeping down the expansion of the purely Indian managed and Indian capitalized industry.

First of all, we have got to enquire whether that Trust exists and secondly if it does exist, if it operates in that way. If we are satisfied on both these points, then I think that it would be necessary for this Board to consider whether the existence of such a trust is to the ultimate advantage of this country; that is to say whether it would result in some direct or indirect benefit to the people as a whole. It may cheapen the manufacture of matches, it may give employment and it may give a thousand one other things. But we have to consider whether, having regard to all the circumstances of the case, it will be to the ultimate advantage of India that this Trust should be allowed to operate in this way. If we find that it would be to the advantage of this country, then it may be our duty to say so. If, on the other hand, we should find that it was not to the advantage of the country, then it would be necessary for us to suggest means by which the country could effectively combat the Trust. I want to make it perfectly clear that in examining this aspect of the case we do not propose to emphasize more than is necessary the aspect of foreign capital as such. That is to say, it will not be necessary for us to consider the question whether foreign capital is at all to be allowed to enter this country. That is a much wider question. It may be that we may have to go into that question to some extent but our attention will be mainly directed to this point whether foreign capital should be allowed to enter this country and eventually establish for itself a monopoly in such an important article of domestic use as matches. Some countries have legislated to prevent foreign capital from dominating an important domestic industry and thus creating a monopoly which might result eventually in raising the price of a common commodity. That aspect of the case is most important and I should expect all parties who have made the allegation of the existence of this Trust to give us as much evidence as they can on the various aspects to which I have referred. I have no doubt that the Trust itself will appear before us and give us all the information that is reasonably possible. If they do not, we shall have to act on such materials as we may have. If they do, we shall take into consideration every aspect of the case from their point of view but it is obvious that if neither you who have made this allegation give us the necessary amount of evidence, nor the Trust the necessary amount of counter evidence, our recommendations cannot be as satisfactory as they might otherwise be. I may tell you that this allegation has been made throughout India by manufacturers of matches. They have complained that the Trust does exist and that it is operating to their disadvantage. For that reason we propose to visit as many provinces as we conveniently can and collect as much evidence as possible on that point.

There is one more point to which I should like to refer. In this enquiry we have got to calculate as accurately as possible the nett loss of revenue to the Government. At present the duty is levied on imported matches. As more matches are manufactured in the country, the manufacturers of these

matches would require a larger amount of chemicals which are also liable to taxation, so that though fewer matches enter the country, more chemicals do. Moreover, Government will get a certain amount of income-tax from the operation of a larger number of companies engaged in the manufacture of matches. And I think it would be necessary for us for that purpose to find out exactly how much duty you would be paying on your requirements of chemicals, what income-tax you will be paying and in what other way Government revenue is benefited so that the gain can be set off against the loss on the Customs revenue on matches. I hope that you will be able to give us all the information we want.

The organisation and beginning of the company.

President.—Mr. Bawaney, you are the manager of Messrs. Adamjee Hajee Dawood & Co.'s Match Works?

Mr. Bawaney.—Yes.

President.—Where is Mr. Adamjee Hajee Dawood at present?

Mr. Bawaney.—In Calcutta.

President.—I may tell you, Mr. Bawaney, and it is of course for you to consider, that we ordinarily expect, whenever possible, the proprietor or the managing director of the applicant company to appear before us to give evidence.

Mr. Bawaney.—Mr. Adamjee Hajee Dawood is detained in Calcutta on very important business. It would of course have been better if he were present, but I hope I shall be able to give you all the information you require. We are quite prepared to give you all the assistance you require and I shall be prepared to place all our cards on the table.

President.—So long as you do not tell me that you cannot answer a question without consulting your principals we won't insist upon their appearance here.

Mr. Bawaney.—I do not think I shall have any occasion for that.

Dr. Matthai.—Are there any of your other directors in Rangoon?

Mr. Bawaney.—At present three are in Rangoon permanently. Mr. Adamjee himself is a permanent resident of Rangoon. There are three directors and one managing director who permanently reside in Rangoon.

Dr. Matthai.—Are you manager or managing director?

Mr. Bawaney.—I am one of the directors.

President.—You have only sent us answers to the first 43 questions; what about the answers to the remaining questions?

Mr. Bawaney.—We have to go into a great number of figures and we have not had time to get the figures ready yet, but we hope to have them ready by to-morrow.

President.—Have you got the necessary instructions from Mr. Adamjee?

Mr. Bawaney.—Yes. We can let you have the replies to the remaining questions most probably by to-morrow evening.

President.—The firm of Messrs. Adamjee Hajee Dawood, I take it, does other kinds of business besides the manufacture of matches?

Mr. Bawaney.—Yes.

President.—You do business on a large scale?

Mr. Bawaney.—Yes.

Dr. Matthai.—May I know what kind of business?

Mr. Bawaney.—Rice, gunny, hessians and matches.

Dr. Matthai.—You have branches in India, have you?

Mr. Bawaney.—Yes.

President.—I want to know why you started this factory in 1924; what was the reason?

Mr. Bawaney.—When we saw that Government had imposed a duty for revenue purposes of Re. 1-8-0 per gross, we thought it would be a very good thing to start the match factory because though in the beginning this industry might suffer and not get the advantage of the extra duty, we thought we would be able to tide over the difficult times and put the industry on a firm footing.

President.—But for the increase in the duty would you have started the industry?

Mr. Bawaney.—When the duty was annas 12 we went into the figures and we thought it would not pay to start the industry then as we did not think with a duty of annas 12 we would be able to hold our own in the industry at that time.

Mr. Mathias.—Did you take into consideration the fact that Re. 1-8-0 was a revenue duty which might be removed at any time?

Mr. Bawaney.—We have an idea that when Government once impose a revenue duty it takes a long time for that to be withdrawn. There are other instances where Government imposed a revenue duty and it took a long time to remove it. If we had thought at that time that the duty would be removed suddenly in a year or two we would not have started the industry.

Mr. Mathias.—Are you aware that the duties are changed from time to time according to the requirements of Government revenue, and that each March there are changes in the duty, sometimes up, sometimes down?

Mr. Bawaney.—There are changes now and then but we did not think that the changes would be such as to affect our business seriously.

Mr. Mathias.—As you knew that the revenue duties were liable to change from time to time, you were prepared to take the risk?

Mr. Bawaney.—To a certain extent we did take the risk.

President.—The duty was raised in the budget of March 1922 I think to Re. 1-8-0. When did you first start your project?

Mr. Bawaney.—In the beginning of 1922 we consulted the expert.

President.—When did you actually order the machinery?

Mr. Bawaney.—About September 1922.

President.—Do you mean to say that you started to manufacture in 1924 February—in such a short time?

Mr. Bawaney.—Yes. It happened in this way. We placed an order for machinery and we got the finishing machine before we got the others and as soon as we had that ready we ordered the splint and veneers from Japan and started manufacturing. We had this advantage that we had been importing matches from Japan since 1914, we were doing very large business in Japanese matches.

Dr. Matthai.—Does that mean that all the matches produced in 1924 were made from imported splints and veneers?

Mr. Bawaney.—Up to October 1924 it was imported splint and veneer; then the splint and veneer machinery arrived and we set them up. As soon as they were ready for operation we stopped the importation of splints and veneers.

Dr. Matthai.—What about the wood? Did you import your wood at the beginning?

Mr. Bawaney.—Yes.

Dr. Matthai.—Where did you import that from?

Mr. Bawaney.—Mainly from Japan and we purchased some here.

Dr. Matthai.—Then you went on importing up to 1926?

Mr. Bawaney.—January 1926.

President.—You say that the total capital invested is wholly Indian, but there is one point in connection with this. It has been alleged that even

matches would require a larger amount of chemicals which are also liable to taxation, so that though fewer matches enter the country, more chemicals do. Moreover, Government will get a certain amount of income-tax from the operation of a larger number of companies engaged in the manufacture of matches. And I think it would be necessary for us for that purpose to find out exactly how much duty you would be paying on your requirements of chemicals, what income-tax you will be paying and in what other way Government revenue is benefited so that the gain can be set off against the loss on the Customs revenue on matches. I hope that you will be able to give us all the information we want.

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Mr. Bawaney.—Yes.

Dr. Matthai.—Where did you import that from?

Mr. Bawaney.—Mainly from Japan and we purchased some here.

Dr. Matthai.—Then you went on importing up to 1926?

Mr. Bawaney.—January 1926.

President.—You say that the total capital invested is wholly Indian, but there is one point in connection with this. It has been alleged that even

some of the factories which are said to be financed by Indian capital are really financed by some of the foreign firms in this way that they give them machinery on credit or on the hire purchase system. I want to know whether such practice exists?

Mr. Bawaney.—So far as my knowledge goes such practice does not exist.

President.—It has been said in some of the documents which have been published that it is a common thing, for instance for a Japanese manufacturer of machinery, to supply all the machines that he can supply, and then working in combination with the manufacturer of raw materials to supply all the raw materials and then again supply the veneers in the same way. In that way it is very largely foreign capital which is really running the industry behind Indian names.

Mr. Bawaney.—The only instance that has come to my knowledge is the case of the Assam Match Works in which Indians take part as directors but the Swedish Trust is supplying all the machinery and material and the supervision is also in their hands.

Mr. Mathias.—So far as you are aware, is the match machinery supplied to Indian manufacturers by foreign firms on the hire-purchase system to any great extent?

Mr. Bawaney.—I have not heard of it.

President.—What do they do precisely? If they don't give the machinery on hire-purchase system, then how do they realise the price of the machinery?

Mr. Bawaney.—We pay cash when we buy any machine.

President.—I am talking of the Assam Match Works.

Mr. Bawaney.—In the Assam Match Works Indians have been appointed as Directors and a certain number of shares has been offered for public subscription, but the Swedish people have kept the control in their own hands.

Mr. Mathias.—Could tell us when this Company was first floated?

Mr. Bawaney.—The prospectus was published on the 28th October, 1925.

President.—Can you allow us to retain the prospectus? We shall revert to this question when we come to the examination of the point about the Trust.

Mr. Bawaney.—Yes.

President.—Then you say you were carrying on this business since 1914.

Mr. Bawaney.—Yes, we were importing matches.

President.—You were importing them principally from Japan?

Mr. Bawaney.—At that time Burma was importing Japanese matches only except one brand which was imported from Sweden.

President.—I think that was the Elephant brand.

Mr. Bawaney.—Yes.

President.—Have you got your former records which would enable us to see at what prices you were importing Japanese matches since 1914?

Mr. Bawaney.—In 1914 the business was done under the name of A. S. Adamjee.

President.—What we want to know really is the pre-war price. During the war prices were very irregular. So the prices that matter to us are the pre-war prices for a couple of years before and since the imposition of the duty.

Mr. Bawaney.—I shall let you have the figures, if available.

President.—You say you are at present employing two Europeans both in the capacity of machinery experts. What nationality are these two Europeans?

Mr. Bawaney.—One is from Czecho-Slovakia and the other is a German.

Dr. Matthai.—Were they both employed in match factories before they came over here?

Mr. Bawaney.—The German had been in a match factory in India for four or five years.

Mr. Mathias.—In which match factory?

Mr. Bawaney.—He erected the match factory near Lahore. He was out here for five years and I think he was detained during the war. He can talk Hindustani very well and therefore he is very useful to us. The other man from Czecho-Slovakia cannot speak a word of Hindustani. He does not know much of English either.

President.—I just want you to tell me what are the principal functions of the German.

Mr. Bawaney.—Erection of the Simplex machines.

President.—Are they all Rollers?

Mr. Bawaney.—Yes.

Mr. Mathias.—Is that his only function?

Mr. Bawaney.—He supervises this work and also the drying drums.

Mr. Mathias.—When your erection is completed, his work will come to an end.

Mr. Bawaney.—He has gone now, but we are importing another man to replace him. We shall have to engage two experts.

President.—Has he worked in the firm of machinery makers?

Mr. Bawaney.—Yes.

President.—Therefore he understands your machinery better than any other man.

Mr. Bawaney.—Yes, Rollers' machinery.

Mr. Mathias.—You say he is leaving you. Do you propose to replace him by another German?

Mr. Bawaney.—He left two days ago and another man is starting in about a week's time.

Mr. Mathias.—Has he also the experience of these Rollers Machines?

Mr. Bawaney.—Yes.

President.—What does the man from Czecho-Slovakia do?

Mr. Bawaney.—He is looking after the splint, veneer and dipping machines and has the experience of these machines for over 20 years.

President.—The same machines.

Mr. Bawaney.—Yes. He is an expert as regards these machines and we have kept him to train up the other men.

Mr. Mathias.—Does the match machinery require a good deal of attention by an expert?

Mr. Bawaney.—At present it is necessary, because we cannot get workmen here, fitters and others who have experience of these machines. When our men get trained up, they will be able to operate the machinery themselves.

Mr. Mathias.—May I take it that if a match factory were started and if it had not experts on its staff with sufficient knowledge of the particular machinery which was employed, then that match factory would probably fail.

Mr. Bawaney.—We will have to employ an expert for some time to come. When the industry has established itself, we would be able to get men from other match factories. At that time it would not be necessary to employ experts, but at a time when there is no established industry in the country, it is necessary to employ experts.

Dr. Matthai.—Where did you purchase these chopping machines.

Mr. Bawaney.—From Japan.

Dr. Matthai.—Why did you get a man from Czecho-Slovakia to start it?

Mr. Bawaney.—He was recommended by Rollers as a man who had experience of the match machinery in Czecho-Slovakia and also in Canada and so we employed him.

Mr. Mathias.—You rely entirely on German machinery and you don't use the Swedish machinery.

Mr. Bawaney.—We had been offered the Swedish machinery, but we didn't buy that for the reason that we were told that the Swedish manufacturers were in the Trust. Consequently we went in for the German machinery. There are two German manufacturers—Baden Engineering Works and Rollers. These two were in combination with the Swedish Trust. After sometime there was some dispute between them and they separated. So we thought we would be on the safe side if we bought the German machinery.

Mr. Mathias.—Is the German machinery, in your opinion, as economical and satisfactory to work as the Swedish machinery?

Mr. Bawaney.—The Swedish manufacturers claim that their machines are superior to German machines, but, in my opinion, looking at the machines, I don't think there is much difference between the two. When these three firms separated, they made a division of the patent rights they had and there is not much difference between the two kinds of machinery.

President.—What about your own experience of match manufacture? Have you had any special training in the manufacture of matches?

Mr. Bawaney.—In 1914 I went to Japan on behalf of Mr. Jamal and made enquiries about the match industry there and tried to learn some secrets, but I didn't have any actual experience of the work. It would not have paid at that time to start the industry here. But since starting this manufacture here I have been going along with the expert and trying to acquire as much knowledge of the industry as I can.

President.—That is to say you acquired a general knowledge of the business rather than the technical knowledge of the industry.

Mr. Bawaney.—I have general experience of machinery, etc., because I have been in another kind of factory for 14 years.

President.—What factory?

Mr. Bawaney.—Groundnut oil mill, ginning mill, etc.

President.—Is that Jamal's?

Mr. Bawaney.—Yes. I was the Manager in Myengyam and Allanmyo Factories.

President.—What sort of a chemist have you got?

Mr. Bawaney.—He is a man from Assam. He has studied chemistry in America for more than three years.

President.—We should like him to be present when we examine you as regards the general process of manufacture

Mr. Bawaney.—He will accompany me to-morrow.

Dr. Matthai.—Apart from looking after machinery and the chemical part of the work, is there any part of the work which requires technical direction?

Mr. Bawaney.—Yes, in the matter of selection of wood.

Dr. Matthai.—Who is in charge of that?

Mr. Bawaney.—The Czecho-Slovakian expert looks after that and two Burmans are being trained under him.

Dr. Matthai.—As regards the selection of wood, what precisely is his business? When different kinds of timber are experimented upon, is it his business to see which particular wood is suitable for match making?

Mr. Bawaney.—Yes.

Dr. Matthai.—Does it not require a knowledge of local forestry?

Mr. Bawaney.—If he has knowledge of the local forests, it would be more to our advantage.

Dr. Matthai.—At present, are you in close touch with the Forest Department?

Mr. Bawaney.—Yes.

Mr. Mathias.—Do you employ any one in the forests to go round and locate the trees there?

Mr. Bawaney.—We have our Forest Manager in the forests. He has many years' experience of forests in Burma.

Mr. Mathias.—Had he been in the Forest Department?

Mr. Bawaney.—Yes.

Mr. Mathias.—I take it that he is constantly touring the forests and looking for suitable kinds of wood.

Mr. Bawaney.—Yes. He also sends us samples of new varieties for us to try.

Mr. Mathias.—Is he responsible to you for working the concession that you have got from the Forest Department?

Mr. Bawaney.—Yes.

The unit of manufacture.

President.—I want to be quite clear of what you mean by a gross of boxes so that we may be sure that we are talking about the same thing. In answer to Question No. 5, you say "The full capacity of our factory is for the manufacture of 6,000 gross of boxes." I take it that you have used the word "gross" in the ordinary sense, meaning twelve dozen.

Mr. Bawaney.—Yes.

President.—Now as regards the boxes, in calculating a gross what boxes do you mean because there are three different sizes? If you take the middle size, it contains only 55 splints. If you make 6,000 gross of boxes of No. 1 size, you will be making nearly twice the quantity as you would be making if the boxes were of the other size?

Mr. Bawaney.—Our full capacity will be 6,000 gross of boxes of full size.

President.—In that case, you may perhaps have 8,000 boxes of the smaller size.

Mr. Bawaney.—We cannot have 8,000 because the capacity of the machinery that makes the boxes as apart from splints is only 6,000. If we make boxes of the smaller size, we may have some more splints only left because our capacity for making boxes is limited.

President.—So far as your manufacture is concerned, which forms the largest percentage of these three sizes?

Mr. Bawaney.—The full size forms the biggest percentage.

President.—What will be its percentage?

Mr. Bawaney.—55 per cent. of the whole lot.

President.—And $\frac{1}{2}$ size?

Mr. Bawaney.—15 per cent. the rest being half size.

President.—So that the full size is the more popular.

Mr. Bawaney.—Yes, in Burma, whereas half sizes are more popular in India and we export half sizes to India. In Burma we can sell $\frac{1}{2}$ in big cities but upcountry they generally like full sizes.

Mr. Mathias.—Can you say on an average for how many days in a year you work?

Mr. Bawaney.—300 days.

Dr. Matthai.—When you say that you can produce 6,000 gross per day, what you really mean is that you can produce 6,000 gross of boxes of full size. When you say that matches are selling at a particular price, I take it that what you mean is that that is the price of full size matches.

Mr. Bawaney.—When I speak of the price, it is the average price, but if you want the price for full size, I can let you have it.

Dr. Matthai.—Of these three different kinds of sizes, that you make, which is the one that comes most in competition with the imported matches?

Mr. Bawaney.—There is equal competition in all the three sizes.

Mr. Mathias.—Are the imported matches all full size matches?

Mr. Bawaney.—In India, half sizes are more popular. So, in India the imports are half size and full size matches, whereas in Burma both full size and $\frac{3}{4}$ size matches are imported.

President.—Do the foreign boxes contain about the same number of match sticks or more?

Mr. Bawaney.—I have not examined that.

President.—The Japanese matches sometimes contain as many as 92 splints.

Mr. Bawaney.—There is no standard size. Some of the boxes may contain more and some less.

President.—If an ordinary purchaser finds that there are 80 match sticks in a full size match box, would he consider that a full quantity?

Mr. Bawaney.—Yes.

President.—He would not object to that?

Mr. Bawaney.—No. If the box is full, no one would object.

President.—I have been told that the purchaser has become wary and that he counts the sticks before buying a particular brand.

Mr. Bawaney.—I have not heard about that. I have not seen any one counting the splints.

President.—He may take it home and count it there and if he finds the number of splints less, he may refuse to buy the same brand again.

Mr. Bawaney.—We have not heard of any such objection.

President.—I don't say in your case. I say that we have heard of that.

Mr. Bawaney.—I have not heard about it.

Mr. Mathias.—You have not considered the desirability of printing on the label that the box contains so many splints.

Mr. Bawaney.—We have not noticed any demand on the part of the public for any such thing and so we have not considered that necessary.

President.—The number of splints varies very considerably in Indian boxes of the same size.

Mr. Bawaney.—It depends upon the thickness of the splints.

President.—In the full size, the number goes up to as many as 120.

Mr. Bawaney.—Yes, if the splints are thin and if the heads are not thick.

Dr. Matthai.—Would a full size match be twice as expensive as the half size?

Mr. Bawaney.—No, not at all.

Dr. Matthai.—It is only just a small difference.

Mr. Bawaney.—Only a slight difference.

Output.

President.—I do not wish to go into the question of your output in 1924-25 because you started in 1924. In 1925, you were still using imported wood. In 1926, you started using your own wood, and you have given your output as 6,000 gross of boxes per day. For a year of 300 working days, your output should be 18 lakhs gross of boxes.

Mr. Bawaney.—Yes.

President.—You only reached an output of 11 lakhs in 1926. How is it that you have not reached your full output yet?

Mr. Bawaney.—Our workmen have not yet become fully efficient, yet with the same machinery in 1925 our output was only 8,58,000 and in 1926 we came to 11 lakhs.

President.—When do you think you would be able to reach your maximum output of 18 lakhs?

Mr. Bawaney.—At present we have reached 5,000 a day according to the February output and we think it will still take some time to reach the maximum.

President.—If it is 5,000 then it is within a short percentage of the maximum production.

Mr. Mathias.—Was your production limited in any way by the demand in 1925-26?

Mr. Bawaney.—No. Our demand is larger than what we can produce.

President.—Would it be possible for you to work two shifts?

Mr. Bawaney.—If we want to we can.

President.—Would your work at night be as satisfactory as in the day?

Mr. Bawaney.—I do not think matches manufactured at night would be as satisfactory as matches manufactured in the day.

Mr. Mathias.—Would the system of working two shifts be prevented by factory laws, women being engaged at night and so on?

Mr. Bawaney.—We can have boys or men working in place of women if we have two shifts.

President.—I notice that in your factory you do a considerable amount of work by hand as well as by machinery. There are other factories in India as well as in Japan, I understand, where practically after the splint stage everything can be done by hand?

Mr. Bawaney.—That is true, only the splint dipping is done by machinery.

President.—But splint dipping is also done by hand?

Mr. Bawaney.—That will be by machinery, but the machines will be worked by hand; they are manual power machines.

President.—You say you cannot work at night.

Mr. Bawaney.—We can, but the quality will deteriorate.

President.—You can do what other people are doing. They make the matches, then they distribute the veneers to be made into boxes and put the labels. What is really done is the splint and it is dipped and then distributed to outside people to be made up.

Mr. Bawaney.—Yes in Japan they do that.

President.—The point I would like to make is this, that instead of two shifts and instead of employing two sets of people in the factory you can work only one shift and hand the splints over to outside people and thus increase your output.

Mr. Bawaney.—There are certain disadvantages in having the work done outside the factory; outside work cannot be so well supervised and the work would not be quite so satisfactory, and we cannot keep account of the veneers issued.

President.—Why not?

Mr. Bawaney.—When done by hand, these people dry the boxes in the sun and the colour of the labels as well as papers fades, the gum dries quickly and the label comes off. We prefer everything being done by machine as there is a better get up.

President.—This is done by contract system in Rangoon by other factories, is it not?

Mr. Bawaney.—Yes, the Rangoon Match Works do it. But we have the necessary machinery and in comparison to the work done in our factory we do not consider hand work as satisfactory.

Dr. Matthai.—A good deal of match boxes are made in their own houses by outside people, are they not?

Mr. Bawaney.—Yes.

Dr. Matthai.—You have never tried that system?

Mr. Bawaney.—We did for a short time.

Dr. Matthai.—And you did not find it satisfactory?

Mr. Bawaney.—We have the necessary machinery and in comparison to the work done in our works we found the work done by hand not quite so satisfactory.

Mr. Mathias.—But the small pieces of veneers which cannot be put on the machine are done by hand, are they not?

Mr. Bawaney.—Yes, if there are pieces of veneers which we cannot put into the machine. But we have got small hand machines for cutting veneers of small pieces so that they may not be wasted.

President.—In your works you do practically everything by machinery except that you do a certain amount of hand filling, is that right?

Mr. Bawaney.—Yes, hand filling, gross packing and putting them into cases—these we do by manual labour.

President.—These processes are all subsequent to the process of manufacture I am talking of the process of manufacture. Removing the bark for instance?

Mr. Bawaney.—Peeling of the bark is done by hand but cutting to pieces is done by machinery.

President.—Then you get on to the splint stage.

Mr. Bawaney.—The actual drying of the splints is done by machinery.

President.—We have seen a factory where drying is done in the sun.

Mr. Bawaney.—That is the Japanese method. There is also mechanical drying.

President.—Then the dipping can be done by hand?

Mr. Bawaney.—Yes. They are filled in the hand frame and then dipped by hand.

President.—Having done that you dry them by machine. Can the drying be done in the sun?

Mr. Bawaney.—I think the Rangoon Match Works do it.

President.—Having got the heads on it is possible after that to do everything by hand, is it not?

Mr. Bawaney.—Yes.

President.—You cut the veneer into proper sizes by machine, then the labelling, pasting, painting the sides all these processes can be done by hand and are done by hand in some factories, are they not?

Mr. Bawaney.—It can be done and some do it.

President.—What it comes to is this, that a match factory may consist really of a splint cutting machine and a veneer cutting machine chiefly and it may be called a factory?

Mr. Bawaney.—Yes. You can have even two small hand chopping machines made of wood and can do everything required, except that the peeling machine will have to be a power machine.

President.—You will also require the veneer machine?

Mr. Bawaney.—Yes.

President.—You will require the peeling machine, the splint cutting machine and the veneer machine and the rest can be done by hand?

Mr. Bawaney.—Yes.

Dr. Matthai.—Why is it that you have never tried to do the debarking by machine? I understand that this is done in European factories by machine.

Mr. Bawaney.—It is only when the bark is very thin and sticky that you require a machine to do it. In the case of the Burma wood it is cheaper to do it by hand; we can remove the bark by a crow bar. We have got the machine but we have found it more economical to remove the bark by hand and we have not used the machine. Except in the case of pine we can remove the bark by hand.

Situation of the factory.

President.—In answer to question 8 you say "In our opinion all the factors mentioned in (a), (b), (c) and (d) under this question are equally important." It is a non-committal reply! There are four things—raw materials, fuel supply, market and labour. The most important thing from the point of view of the industry is probably raw materials. One of the conditions laid down by the Fiscal Commission is that there must be an abundant supply of the principal raw material. If you have not got that it is doubtful whether you would be able to establish a case at all.

Mr. Bawaney.—In our case we have got all the four things here.

President.—I do not dispute that, but would you not regard wood as the principal raw material and therefore the most important factor?

Mr. Bawaney.—Yes.

President.—I want to know whether there are any climatic difficulties in the manufacture of matches. In Burma you have only got two seasons, dry and wet.

Mr. Bawaney.—We have not experienced any difficulty on account of the wet season. We have manufactured matches in the wet season.

President.—One of the defects in Indian matches is that in the monsoon the heads come off.

Mr. Bawaney.—It is not on account of the wet season, but on account of the defects in the composition of the chemicals employed.

President.—The dampness would affect the matches. The best match in India some times would not strike at all.

Mr. Bawaney.—The defect is in the composition. You should be careful to see that the chemicals employed and the paste are not easily affected by damp.

President.—You don't consider that climatic conditions matter in the production of good matches.

Mr. Bawaney.—No.

Mr. Mathias.—Do you have to lay in any stock of wood during the rains or can you extract wood then?

Mr. Bawaney.—We extract more wood during the rains.

Mr. Mathias.—In regard to the quality of wood, is it correct to assume that if the wood is kept in water for any considerable time, it is useless for your purpose.

Mr. Bawaney.—Not if it is kept under water.

Mr. Mathias.—How long could it be kept in water and still be useful?

Mr. Bawaney.—Even for one year if it was kept under water, it would be useful for our purpose.

Dr. Matthai.—On the question of market you say the location of your factory in Rangoon is advantageous. Of the 11 lakhs of matches that you made in 1926, what proportion did you export to India?

Mr. Bawaney.—25 per cent.

Dr. Matthai.—And the rest did you sell in Upper Burma?

Mr. Bawaney.—25 per cent. was exported to India, about 25 per cent. was sold in Lower Burma and about 50 per cent. in Upper Burma.

Dr. Matthai.—As far as the market in Upper Burma is concerned, a place like Mandalay for the location of the factory would be more advantageous than Rangoon.

Mr. Bawaney.—If our factory caters only for Upper Burma, it would be more advantageous to have the factory in Mandalay, because there would be a saving in freight if that is the only criterion. But if it is to have an export business too, it is more advantageous to have the factory at Rangoon.

Dr. Mathias.—As things stand at present, 50 per cent. of your sales are in Upper Burma.

Mr. Bawaney.—That was in 1926. Since 1926 we have been exporting large quantities to India. Our output has increased and our export to India has also increased.

Mr. Mathias.—As regards the fuel supply, we shall probably discuss the question at greater length later. Do you attach any great importance to the fuel supply, because I understand most of the factories are able to supply their fuel by waste wood.

Mr. Bawaney.—So far as we are concerned, we don't attach much importance to fuel. We are able to meet our requirements from the spare waste wood.

President.—As far as I can see the establishment of a factory in Mandalay or Moulmein or any other place would have no particular advantage over a factory established in Rangoon so far as Burma itself is concerned or India is concerned, is that so?

Mr. Bawaney.—No.

President.—Except perhaps as regards the market in the immediate vicinity.

Mr. Bawaney.—That is so, but the disadvantage would be that we would have to take imported raw materials from Rangoon.

President.—As regards the more distant markets, they would not have any very great advantage perhaps because they would have to pay a higher freight so that in your opinion it would be more advisable if more factories were to be started at all in Burma, they should be started only in Rangoon rather than in any other place?

Mr. Bawaney.—Yes, if they want to do it on a large scale.

President.—You would recommend that it should only be done in Rangoon.

Mr. Bawaney.—Yes.

Dr. Mathias.—Now to judge the relative importance of the various conditions, am I right in thinking that of the three factors, labour, cost of the wood and the cost of other materials, the biggest item is the cost of labour; the next biggest item is wood and the third is the other materials?

Mr. Bawaney.—Yes.

Dr. Mathias.—Including all the other materials except wood.

President.—Supposing you were to start another factory, where would you start?

Mr. Bawaney.—In Rangoon only.

Quality of Indian made matches.

President.—We put you three different questions in question No. 9. The first was as regards the difference in appearance and quality generally.

Mr. Bawaney.—Yes.

President.—As regards those points you say that the Indian matches are perhaps inferior to imported matches. Do you mean that they are inferior both to Swedish and Japanese matches or to Swedish matches alone?

Mr. Bawaney.—They are inferior to Swedish matches. If they are inferior to Japanese matches, they are only inferior to matches made out of aspen wood. On the contrary the Indian matches are superior to dark wood Japanese matches.

Mr. Mathias.—Do you consider Sawbya matches are inferior in colour to that of imported aspen matches?

Mr. Bawaney.—These matches are only inferior to Swedish matches in appearance.

President.—I have compared your *sawbya* matches with the best Swedish matches. It is only with regard to the superior Swedish matches, they appear inferior as regards colour.

Mr. Bawaney.—The finish is better.

President.—For practical purposes really speaking there is not very much difference. So far as lighting capacity goes, is there any real difference?

Mr. Bawaney.—There is no difference in the practical use of the thing.

Dr. Matthai.—Is the *sawbya* match more brittle?

Mr. Bawaney.—No.

President.—Then you say another difference may be in respect of the composition of chemicals, but that would be really due to lack of experience.

Mr. Bawaney.—Quite.

President.—There is no natural defect there.

Mr. Bawaney.—No.

President.—That does not mean any natural disadvantage?

Mr. Bawaney.—No.

Dr. Matthai.—As regards chemicals, you get your chemicals from abroad. The fact that Indian matches are inferior in respect of chemicals is due to the fact that you use different proportions.

Mr. Bawaney.—Yes. We are not yet able to fathom the secret of proper composition.

Dr. Matthai.—Is the proportion in which the chemicals are mixed a trade secret?

Mr. Bawaney.—Yes.

Dr. Matthai.—You make your own formulas.

Mr. Bawaney.—There are chemical elements of water in different places. The water of different places affect the chemicals differently. One recipe which may be satisfactory to one place will not be applicable to another place.

President.—Are you getting over the difficulty? Will you be able to get the proper formula in a little more time.

Mr. Bawaney.—Yes.

President.—The next point is as regards the prejudice. What we had in mind was that in this country a locally made article is generally supposed to be inferior to the imported article, but that prejudice may be carried too far. What we wish really to know is. Is it a real prejudice based on the inferiority of the quality of the matches or was it merely because it was a locally made article?

Mr. Bawaney.—The majority of the people have prejudice against Indian matches because in the beginning the Indian matches were bad. Now that prejudice is being gradually removed. Still, there are some people who think that only the high priced matches can be good and they do not want to purchase the locally made matches.

President.—Is it your point that at the beginning there was some justification for this prejudice on the part of the consumer because the matches were bad?

Mr. Bawaney.—Yes.

President.—Now that the quality has improved, there is not the same justification for the prejudice to exist?

Mr. Bawaney.—That is the thing.

Dr. Matthai.—If your splints can be made as white in colour as the imported matches and if the quality of your chemical composition is quite as good, then there is nothing to prevent you from getting as good a price as the imported article.

Mr. Bawaney.—Not just now but when the prejudice is removed, when people come to know that Indian matches are as good as the imported matches, then we can realise the same price.

President.—To-day the prejudice does exist to some extent.

Mr. Bawaney.—Yes, and it is not a prejudice that can be removed at once.

President.—What it comes to is this that a consumer who has this prejudice would pay four annas more for a dozen boxes of the foreign make than he would pay for the Indian article.

Mr. Bawaney.—Yes.

President.—So long as that prejudice does exist, you think that the Indian manufacturer will have to sell his matches at a lower price.

Mr. Bawaney.—Certainly?

President.—Then, you have not answered question 9 (c). I want to know how much cheaper you would have to sell your matches to a consumer who is using foreign matches to-day to induce him to buy yours?

Mr. Bawaney.—About one rupee per gross, for the full size match. We shall have to sell our matches by one rupee less than foreign matches.

President.—That is at how much per gross?

Mr. Bawaney.—In Burma the difference is about one rupee.

Dr. Matthai.—Take the Swedish match. What is the price of that in Burma?

Mr. Bawaney.—Rs. 132 per 50 gross full size.

Dr. Matthai.—What would be the price of your matches of the same size?

Mr. Bawaney.—About Rs. 90. The difference is about Rs. 42 for 50 gross.

President.—The Swedish manufacturer then is in luck's way in Burma.

Mr. Bawaney.—Yes. But in India their price is Rs. 2-10-0 per gross. There we are selling at Rs. 1-8-0 per gross, the difference being about 12 annas.

President.—The difference is about fourteen annas if you take India and Burma together.

Mr. Bawaney.—Yes.

President.—They cannot sell matches cheaper in Bombay. They must sell their matches at more or less the same price.

Mr. Bawaney.—They sell their matches for the price they can realise in the market. They don't work on the basis of costs. They sell at whatever price they can realise.

President.—It comes to this that they will get as much out of this prejudice as they can in any market.

Mr. Bawaney.—Yes.

Mr. Mathias.—Can you tell me what your present price is?

Mr. Bawaney.—About Re. 1-13-0 per gross for full size in Burma.

Mr. Mathias.—What is the highest price you have ever been able to get so far?

Mr. Bawaney.—Rs. 2-8-0 per gross.

Mr. Mathias.—I suggest to you that your reduction in price from Rs. 2-8-0 to Re. 1-13-0 is due not so much to prejudice against Indian matches as to the competition between Indian match producing firms.

Mr. Bawaney.—When we got Rs. 2-8-0 per gross, Swedish matches were not in the market. Then, only one brand of theirs was on the market. At that time our own costs were very high.

Mr. Mathias.—The question of cost does not come in here. Every match factory sells its matches at the maximum price it can get. You got Rs. 2-8-0 two years ago. At that time Sweden got only Rs. 2-9-0. The money value of the prejudice was about 1 to 4 annas.

Mr. Bawaney.—At that time the Japanese prices were very high and there was a large difference between their price and our price. Their price was Rs. 3-0-0 per gross.

Mr. Mathias.—What was the year when you were selling at Rs. 2-8-0?

Mr. Bawaney.—1924. At that time we imported Japanese splints, boxes, labels, everything and we did the dipping only here.

Mr. Mathias.—The value of the prejudice so far as the striking property is concerned amounts to very little.

Mr. Bawaney.—At that time, people did not know that the striking property of the Indian made matches was not so very good.

President.—They mistook them for the Japanese made matches.

Mr. Bawaney.—Yes.

Dr. Matthai.—Can you tell me from your experience as far as the Burma market is concerned whether your price is affected to any extent by competition from other Indian factories in Burma?

President.—Is it the case that internal competition compels you to reduce the price?

Mr. Bawaney.—Not in Burma.

President.—In Burma it may not be so, but in India there is to be a factory which is said to be controlled by a Trust. That Trust competes against you by manufacturing matches in India. They reduce the price of Indian matches and therefore you have also to reduce yours.

Mr. Bawaney.—Yes.

President.—As regards imported matches, they still sell at a higher level because of this prejudice?

Mr. Bawaney.—Yes, because people are under the impression that Swedish matches must be better.

President.—Take this concrete case. Swedish matches were formerly selling at Rs. 2-12-0. Now the Swedish Company have started manufacturing matches here. They sell locally made matches at Re. 1-10-0 per gross. So, you have also to reduce your price to Re. 1-10-0, though the foreign matches are still selling at Rs. 2-10-0. The difference between your price and the Swedish price is still one rupee and that is due to the prejudice.

Mr. Bawaney.—Quite so.

Mr. Mathias.—There is another part of the question, No. 8 (c). What difference in the price between the imported and Indian matches would you consider reasonable having regard to the quality? That is to say, if the purchaser was entirely unprejudiced and looked to the quality only, what would be the difference?

Mr. Bawaney.—At the most 4 to 6 annas.

Dr. Matthai.—You say in answer to question 9 that there are certain markets where preference is actually given to Indian matches. What markets are those?

Mr. Bawaney.—In the Madras Presidency we have found that consumers have realized that there is not much difference in quality and so preference is given to Indian matches which are cheaper.

Dr. Matthai.—Preference is given on account of cheapness of the matches when the quality is considered to be the same and the prejudice is removed?

Mr. Mathias.—They would not be preferred if they were sold at the same price?

Mr. Bawaney.—No.

President.—As regards coloured matches, have you tried them here to disguise the colour of the wood?

Mr. Bawaney.—There are not many buyers of coloured matches.

President.—There is some prejudice against coloured matches so that it is not worth your while manufacturing them. Is that what you mean?

Mr. Bawaney.—They look to the country of manufacture and when they find that they are of Indian manufacture on account of the prejudice they prefer the foreign article.

Characteristics of suitable wood.

President.—I want to know generally what constitutes good quality of wood for the purpose of manufacturing matches? What are the special properties?

Mr. Bawaney.—It must be soft, the grain should be fine so that there may be no difficulty in making splints otherwise if you strike the match it would break, that is to say it should have straight fibres so that when cutting into splints it can be cut nicely and the polish would be better. Then again it should not crack and should not be resinous and when drying it should not lose its straight shape and get curved. The colour should be white. There are many kinds of wood which are white but do not preserve a straight shape when drying.

President.—Are these the principal properties of good match wood?

Mr. Bawaney.—Yes. There is another thing. The wood should not be such as would attract damp. There are some kinds of wood in which the sap is sweetish and draws moisture during the rainy season and the wood becomes damp.

President.—Most of the conditions are more or less what we may call conventional. If you can prove that matches made from dark coloured wood which are not well polished are just as useful and strong and burn as well as the other ones, in course of time they may become as popular as the other?

Mr. Bawaney.—That is so; the prejudice against colour should disappear very soon because matches are not meant for ornaments but are burnt and thrown away.

Dr. Matthai.—Can you bleach coloured wood?

Mr. Bawaney.—Yes. In Japan they do. We have also tried it ourselves by treating them in sulphur fumes but it is a troublesome job, and we think the prejudice is gradually dying down against coloured wood and that people are getting accustomed to it and the easiest way for us would be to accustom the people to dark wood rather than bleach them.

President.—There is one rather important point. The wood must be such as to have practically no industrial value for other purposes. If it is wood required for other things it would be expensive.

Mr. Bawaney.—That is so, in fact the Forest Department classify the match wood as jungle weed. Before we began to use this wood the Forest Department used to spend money from their own pocket to cut these trees in order that more valuable trees would get better nourishment.

President.—Is it generally correct to say that as far as your knowledge goes all this wood which you have found suitable for matches has really no market value for industrial purposes?

Mr. Bawaney.—That is so.

President.—Do these trees ordinarily grow naturally?

Mr. Bawaney.—Yes; the trees we are using have not been planted, they are of natural growth.

Size of log required.

President.—What is the smallest girth of log that you can conveniently use for splints?

Mr. Bawaney.—With the German machinery that we have the smallest girth we can use is 3 feet.

President.—What is the biggest girth that you can use?

Mr. Bawaney.—We have machines with which we can use up to 7½ feet girth, but we understand that in Port Blair there are virgin forests where

wood up to 12-foot girth is available, so we ordered machinery for using up to 12-foot girth. They have arrived but have not been set up yet.

President.—Are there many sorts of wood in which the girth is as much as 12 feet?

Mr. Bawaney.—Yes.

President.—You say you can use as small a girth as 3 feet, but I notice that in your concessions the smallest girth is 5 feet?

Mr. Bawaney.—Quite so. When we were discussing this matter with Mr. Hewett, the Forest Officer, we decided to have 5' as the minimum girth. When we go back to the first compartment after 15 years, we would be able to use the other smaller girth trees. They would be ready for cutting by the time when we go back to the first compartment.

Mr. Mathias.—The limitation has been placed by you and not by the Forest Department.

Mr. Bawaney.—We are getting wood from other places also. We say that there would be no difficulty if we agreed to the 5' girth. We found that 5' girth is more economical and we get a better outturn. Mr. Hewett told us that he would agree to a smaller girth if we wanted it. In the summer when we had occasion to cut smaller girth trees we got special permission from the Forest Department.

Dr. Matthai.—Why is it more economical to use a girth of 5'?

Mr. Bawaney.—For one thing there is less wastage from the 5' girth log and there is less handling which saves time and labour. We get a better output. If we use 3' logs, we have to do twice as much work.

Dr. Matthai.—That is to say it saves waste of wood and waste of time. Both those considerations apply to the maximum and minimum girth. Supposing the log was 8" in diameter smaller than 1' and you try to work your machine on that, there would be some waste of wood and waste of time in handling.

Mr. Bawaney.—From each log the central portion or the heart about a diameter of 3½"—would have to be discarded and so proportionately there would be a very big wastage in 10" diameter logs than in 5' logs.

Mr. Mathias.—When I went round the factory I noticed that in some of the bigger logs, the central portion or the heart as it is called which is not suitable for producing veneers is rather large. Is the central portion or the heart larger in the case of big logs than it is in small logs?

Mr. Bawaney.—That depends more on the soil and climate and not on the size of the log. If the tree has been growing on boggy land, the heart wood would be larger than if the tree had grown on drier soil.

Dr. Matthai.—Whatever may be the kind of tree, supposing you are using sawbya, if the sawbya tree grows in this kind of soil, you will find that there is a larger amount of heart wood than if sawbya grows in a more favourable soil.

Mr. Bawaney.—We are at present using sawbya from Burma as well as from Andamans. In the case of Burma wood we have to discard only about 3½", but in about 30 per cent. of the logs we get from Andamans, we have to discard a much larger proportion.

Dr. Matthai.—Actually your peeling machine can work it down to a diameter of 3½", but there are some kinds of wood on which you would not be able to do that.

Mr. Bawaney.—It can work up to 3½", but if the wood is soft and if the veneer is not suitable for our purpose, we have to stop it.

Extraction, transport and storage of logs.

President.—In order to get good results I take it that the log has to be fairly green.

Mr. Bawaney.—Yes.

President.—That is to say how long after extracting, can you reasonably use it? I am talking generally of Burma wood.

Mr. Bawaney.—On an average we can allow the logs to remain for about three months.

President.—In the forests?

Mr. Bawaney.—From the time it is felled and up to the time it is put on the peeling machine.

President.—In the interval you have to keep it under water?

Mr. Bawaney.—We have facilities for keeping them in water. It would not matter even if we don't keep the logs in water for about three months after felling.

President.—The reason why I am asking you is an important one. Supposing we came to the conclusion that no foreign wood ought to be used, then the question will arise—can Burma wood be used in Bombay?

Mr. Bawaney.—Yes.

President.—According to you it must be used within three months.

Mr. Bawaney.—Yes.

President.—From the forest to Bombay it may take a much longer time.

Mr. Bawaney.—What I mean is that it must be used in three months if it is left dry, but if after cutting it in the forest, it is brought by water to Rangoon, it has to remain in a dry place for only one month on the steamers, so it would not be affected. At present Burma wood is being exported to Calcutta.

President.—Take the dry season when you cannot float the logs at all. In that case you have to bring the logs by lorry or rail until you get enough water in the creeks. It may be that you cannot get any cargo steamer for six weeks.

Mr. Bawaney.—If there are forests where there are no facilities for floating the log during the dry season, these forests can be worked for export business for six months only during the monsoon.

President.—Take your own forests. It is only 60 miles by road and 120 miles by water. Can you float the logs all the year round from your forests?

Mr. Bawaney.—Provided we make a forest road for about 30 miles.

President.—That means more expense.

Mr. Bawaney.—According to our calculation the additional cost would be about Rs. 6 to Rs. 8 per ton, if we bring the log by bullock cart to the banks of the river. There are many forests in Burma from which we are purchasing even now during the dry season and we can get logs from them.

President.—How do you get them now?

Mr. Bawaney.—By rail.

President.—How long can you keep this wood under water before it perishes or before it becomes less serviceable?

Mr. Bawaney.—If it is kept under water even for one year, it would be quite useful.

Dr. Matthai.—Does that apply to all kinds of wood?

Mr. Bawaney.—Yes, to all kinds of wood that we have been using up till now.

President.—Are not they liable to be eaten by insects?

Mr. Bawaney.—If the log be completely under water, the insects won't attack the logs, but if the top of some portion of the log be exposed to the air, then they would attack the exposed portion of the logs after 6 months.

President.—Would it be easy to keep the logs, which are supposed to float, under water?

Mr. Bawaney.—If you make a tank, you can put all the logs. The top ones would press down the bottom ones. We do like that. Our tank would

accommodate 500 logs floating. Then after that when we put more logs, it keeps the logs under water.

Mr. Mathias.—Have you had any cases in which wood otherwise serviceable for match making purposes has become unserviceable for match-making during transport?

Mr. Bawaney.—Yes.

Mr. Mathias.—What is the percentage of your wood that has become so unserviceable?

Mr. Bawaney.—Formerly we had to suffer because sometimes the logs would be delayed in the forests on account of the removal passes not being granted by the rangers. The rangers would be busy elsewhere and they could not come to our lot and would not be able to measure the logs and give the removal passes. These logs would sometimes be delayed near the railways. Sometimes wagons would not be available and sometimes there would not be cranes to lift the logs on to the wagons. Thus the logs would occasionally be delayed for about 10 months. Now all these difficulties have disappeared.

Mr. Mathias.—When you purchase from contractors, do you find a large percentage of logs becoming useless?

Mr. Bawaney.—Formerly our contractors did not understand exactly what kind of logs was required by us. They were sending cracked and unsuitable wood for our purpose. But now they also understand quite well what the exact sort of thing should be sent to us and we have not now to reject even a single log.

Mr. Mathias.—Take the case cited by the President just now. Supposing some contractors undertook to export wood to a match factory in Bombay, would there be any difficulty in arranging with the contractors for guaranteeing that the quality of the wood would be suitable for match-making.

Mr. Bawaney.—At present they are petty contractors. They are not in a position to guarantee the logs up to Bombay. They can supply only here in small quantities. I do not consider it impossible to have arrangements made. If a really good demand springs up, there will be big contractors in the field who will undertake to do this business. There is also another way to overcome the difficulty of the wood drying up. After the log is cut, if some kind of composition is applied at both the ends, then the log would be in good condition for six months during which it can be used for match making purposes. We imported some Aspen wood from Europe with the ends painted up and this wood was lying for 9 months in the sun and still we were able to use it. When the ends are closed up, the wood does not get dry. When we had occasion to bring some logs of 3 ft. girth to which I had already referred, we also treated the ends with glue and other things. By that way, we did not get complete protection but still we got some kind of protection.

Mr. Mathias.—You were saying just now that if a big demand sprang up in Bombay, no doubt a contractor would be forthcoming to supply the wood. You have some considerable experience. Could you give us some idea as to what would constitute a good demand? Would a demand for 10,000 tons annually be a good demand?

Mr. Bawaney.—I would consider that a good demand.

Dr. Matthai.—But these contractors that you have been speaking of deal in all kinds of wood, don't they?

Mr. Bawaney.—There are some contractors who deal in both soft and hard wood. There are some who deal only in soft wood. Government call for tenders and they submit their tender and if they secure the forest, they work it.

Dr. Matthai.—The contractors from whom you are purchasing part of your supplies, do they deal only in soft wood?

Mr. Bawaney.—Three out of our four contractors are dealing only in soft wood.

President.—The point is that those people who deal in hard wood are really big contractors.

Mr. Bawaney.—Yes, but there is not a big demand for soft wood. Consequently those who care for the soft wood are the small contractors. If however, a big demand springs up, big contractors would come and take up this business.

President.—There is a great deal of misapprehension about the demand. Even if India manufactured all the matches it required, the demand in terms of forest language would not be very great. The demand may come to 100,000 tons. That would not be considered a big demand by the Forest Departments of all the provinces. One hundred thousand tons of soft wood would be only a small quantity.

Mr. Bawaney.—It may be a small quantity in terms of the Forest Department, in terms of the growth of soft wood in Burma but in terms of the contractor it would be a big quantity.

President.—If Burma supplied all the wood required by the Match Industry, on the present figures it would not amount to much more than 100,000 tons but there are some parts of India which will get their own wood. In that case, the demand will be less than 100,000 tons. Therefore I think that it will not attract large capitalists into the business. It is not big enough for that purpose.

Mr. Bawaney.—In my opinion even 10,000 tons a year would be sufficient to attract reliable contractors.

President.—At present with your royalty it comes to Rs. 35 a ton. Cut out the royalty, it comes to Rs. 20 a ton, that is for extraction. The total turnover would be only about two lakhs.

Mr. Bawaney.—Even if the contractors made only Rs. 5 a ton, they would make Rs. 50,000 on 10,000 tons. It would be a paying business for the contractor.

Output per ton of wood.

President.—You talk of 50 c. ft. as representing a ton. That is only a measurement. Now I want to know the weight in lbs. of one c. ft.?

Mr. Bawaney.—25 to 38 lbs. per c. ft. on an average. Letpan weighs 23 lbs. per c. ft.

President.—Letpan you use only for veneers.

Mr. Bawaney.—Yes. Gwe weighs 26 lbs. per c. ft.

President.—Shall we take 25 lbs. as the average?

Mr. Bawaney.—The average will be about 30 lbs. There are some kinds of wood which weigh as much as 40 lbs. per c. ft.

President.—My impression is that it will be about 30 lbs. What I wish to know is really the quantity. When you say that you require 1 ton for 200 gross, how much wood do you recover in the finished condition in lbs.? What I want to know is what do you really get out of one ton because the rest would be used as fuel and packing cases?

Mr. Bawaney.—I think that 35 to 40 per cent. is the loss incurred by us on account of the evaporation of water in the wood. When we use the wood, it is wet.

President.—Take the Aspen wood. Out of one ton of Aspen they really get about 200 gross.

Mr. Bawaney.—We lose about 25 per cent. on account of our workmen not being skilled enough.

President.—At what stage does the skill come in so far as wood is concerned?

Mr. Bawaney.—In making boxes.

President.—I am not talking of boxes. I am talking of splints.

Mr. Bawaney.—I shall let you know to-morrow.

President.—What I want to know is this. When you say you use 50 c. ft. of wood, you get out of that perhaps 150 boxes of splints—that is about right

just now. Out of the same quantity, you get sufficient materials for making packing cases. How many c. ft. will that represent?

Mr. Bawaney.—The quantity we can use for packing cases would be negligible because if we work up to 3½ inch diameter then what is left cannot be used for packing cases.

President.—What does that represent if you have to waste 3½ inch diameter? How many cubic feet does it mean?

Mr. Bawaney.—That depends upon the girth of the log; the larger the girth less would be the percentage of wastage. We have not gone into these calculations.

Dr. Matthai.—If you take a log of 18" diameter and if you left 3½" what would be the proportion of the wastage?

Mr. Bawaney.—We shall let you have the figures.

President.—For the purpose of calculation should we be justified in taking 156 gross as your outturn from 1 ton of wood?

Mr. Bawaney.—Yes.

President.—That is the present outturn; do you expect to get it up to 200?

Mr. Bawaney.—Yes.

President.—What was your outturn last year?

Mr. Bawaney.—In the beginning when we started it was varying from month to month from 130 to 146, but in the later months it was 156. 156 is the average for the whole years; it was lower at the beginning and higher at the end. We reached up to 165. I will give you the exact figures. We have got monthly statements.

Mr. Mathias.—What is the best outturn you got from European aspen?

Mr. Bawaney.—We will let you have the figure to-morrow.

President.—By 156 gross you mean 156 gross boxes of matches?

Mr. Bawaney.—Yes, from 1 ton we get 156 gross boxes including veneers.

President.—I take it for packing cases you require 5 c.ft. for a case, that is to say you require 15 c. ft. nett weight.

Mr. Bawaney.—Yes, 15 c. ft. of plank.

President.—How much would the gross weight come to?

Mr. Bawaney.—25 c. ft.

President.—That is to say you want 25 c. ft. in round log or 15 c. ft. of plank for three packing cases.

Mr. Mathias.—What percentage of these planks do you supply now from waste wood?

Mr. Bawaney.—Not more than 3 to 4 per cent.

President.—It comes to this that for splints and veneer and packing cases you want 75 c. ft. in the log for 156 gross?

Mr. Bawaney.—Yes.

President.—How does that compare with the imported wood, say Swedish?

Mr. Bawaney.—What is called Swedish wood is really Russian wood. Russian wood is not as economical as the wood we get locally because the former is only from 9" to 14" in diameter and that means a lot of wastage whereas we can get wood of much wider girth locally. When our workmen get more efficient it would be more economical to use local wood so far as output is concerned.

President.—Is the Japanese aspen of the same kind as the Russian?

Mr. Bawaney.—Japan too imports from Russia. Germany and Austria also import from Russia. Even Sweden cannot meet all its demand from its own aspen; it also imports from Russia. As regards wood we are much better placed because India can always get all the wood it requires locally whereas other countries cannot.

Mr. Mathias.—How many c. ft. of aspen would it take to make 156 gross boxes of matches and three packing cases?

Mr. Bawaney.—I will let you have these figures later on.

Local timber resources.

President.—Then according to you India is much better off than other countries as regards wood?

Mr. Bawaney.—There is no doubt about it. We are only handicapped as regards chemicals. As regards labour also we are better placed and lastly India has got a very good market.

President.—You have not given us the price of imported log. You import logs up to the end of 1926. Will you please let us have the c.i.f. price?

Mr. Bawaney.—We imported aspen from Japan and also 165 tons of Russian wood, *viâ* Bremen.

Dr. Matthai.—In your output last year when you made 11 lakhs gross-boxes was there any imported wood?

Mr. Bawaney.—Yes. We did not actually import; we had some left in stock and we used it.

Dr. Matthai.—How much of the wood did you get from your reserves last year?

Mr. Bawaney.—In 1926 we extracted 3,793 tons from our own reserve.

Mr. Matthai.—And the whole of the balance you got from contractors, did you?

Mr. Bawaney.—Yes, out of which we got 1,743 tons from the Andamans. In all we had 9,962 tons in 1926.

Mr. Mathias.—This 3,793 tons of wood from your own reserve, was that all from one single coupe? You divide your block into 15 coupes I understand of 10 compartments each.

Mr. Bawaney.—We worked 10 compartments which comes to practically 1/15th of the whole block.

President.—Does this 3,793 tons represent 3,793 trees or more or less or what?

Mr. Bawaney.—On the average it would be about that.

President.—All these trees were 5 feet girth?

Mr. Bawaney.—4' 6" and over.

President.—What I want to know is, did you actually work all the 15 compartments?

Mr. Bawaney.—Of these, three compartments have not been worked, because there were wild elephants.

President.—Did you finish all the wood that you could extract from these compartments?

Mr. Bawaney.—No. There is about 1,000 tons left.

President.—It means that you have got nearly 5,000 tons.

Mr. Bawaney.—Yes.

Mr. Mathias.—This particular coupe, is it particularly rich in match wood?

Mr. Bawaney.—Yes, it is richer.

Dr. Matthai.—These trees that you extracted last year from your reserves were all, I think, extracted from the Paunglin reserve.

Mr. Bawaney.—From the Mahuya reserve.

Dr. Matthai.—You didn't touch the Paunglin reserve last year.

Mr. Bawaney.—No.

Mr. Mathias.—You have no idea as to whether it contains 5,000 or 10,000 tons,

Mr. Bawaney.—Forest people cannot give us any idea. The Forest Department examined few compartments properly and then they judged the apparent vegetation in the other compartments on the basis of the compartment which they examined properly. They don't take so much trouble about this wood as they do about the teakwood. In the teakwood forest each tree is examined.

Dr. Matthai.—In this 3,793 tons, how many kinds of trees are included?

Mr. Bawaney.—Five kinds.

Dr. Matthai.—Those are mentioned in the Forest Officer's letter to you.

Mr. Bawaney.—Yes.

Dr. Matthai.—And nothing else.

Mr. Bawaney.—No. I have got a list of all the kinds of wood that we have purchased in the year 1926 and you will see that 90 per cent. of our requirements are classified under five or six species.

President.—Do you expect to get the same quantity from the remaining coupes? You estimated that this one coupe would yield 5,000 tons roughly.

Mr. Bawaney.—In the new ten compartments which we are going to work next year according to the estimate made by our Forest Manager, we should be able to get 3,000 tons.

Mr. Mathias.—You have the whole of the Mahuya reserve.

Mr. Bawaney.—Yes, here is a report from our Forest Manager (handed in).

President.—Has he enumerated these trees?

Mr. Bawaney.—He has not actually numbered the trees, but he has forest experience and has been through all these coupes.

President.—How many compartments have you worked during this year? It is now three months.

Mr. Bawaney.—Not a single compartment.

President.—How is that?

Mr. Bawaney.—We stopped at the end of December, because there were no water facilities. We shall begin again in May.

Mr. Mathias.—What are you doing now for wood?

Mr. Bawaney.—We have some wood in stock and we have made contracts for supplies from Port Blair for about 7,000 tons.

Mr. Mathias.—Why do you get logs from Port Blair when you have got logs in your own reserve?

Mr. Bawaney.—We expect to get about 4,000 tons from our concession whereas our requirements are about 11,000 tons.

President.—From your reserve on an average how much do you expect to get?

Mr. Bawaney.—3,500 tons of 5 ft. girth.

President.—Then you have not got enough in your reserve for your full requirements and you have to depend on the Andaman Islands?

Mr. Bawaney.—We have also tendered for the Pugyiokkan reserve. If this also be given to us, we expect to get 1,500 tons a year. There are two other forests for which we are negotiating. We had discussions with Mr. Barrington and we expect a good quantity from there too. As soon as we get a sufficient quantity from our own reserve, we shall give up the practice of ordering wood from the contractors.

Dr. Matthai.—When you get wood from Andamans, what is the cost of it at your factory?

Mr. Bawaney.—One kind costs Rs. 41 a ton and other kind Rs. 36 a ton. These contracts are with the Forest Department.

Mr. Mathias.—Is it sent here by Government?

Mr. Bawaney.—Yes.

Mr. Mathias.—Why not you buy wood from contractors?

Mr. Bawaney.—If we get a reliable contractor, we would be willing to pay a rupee or two more. We had a discussion with Messrs. Mason and Bonington and they told us that abundant supplies of wood could be had from Andamans.

Mr. Mathias.—Do the Government work the forests?

Mr. Bawaney.—Yes.

Mr. Mathias.—Would Government be prepared to supply you with an unlimited quantity?

Mr. Bawaney.—At present Government have guaranteed 500 tons a month and have promised to try to give 800 tons a month.

President.—These forests are under the control of the Government of India.

Mr. Bawaney.—Yes.

President.—Who is the officer in charge?

Mr. Bawaney.—Mr. Mason, the Chief Conservator of Forests.

Dr. Matthai.—It is practically the same kind of wood.

Mr. Bawaney.—Sawbya and Bonmeza. They say they have considerable quantities of sawbya. Mr. Pearson, the Government Economist, had a discussion with me when he came here and he told me that there is a very large quantity of sawbya available there and supplies could be had from there.

Mr. Mathias.—I suppose the Andaman Government could supply wood at approximately the same price to Calcutta.

Mr. Bawaney.—I can't say.

President.—Do you make an annual arrangement or have you got a long term arrangement with the Andaman Forest Department?

Mr. Bawaney.—Only an annual arrangement. We are also thinking of asking for a long term arrangement. We don't think they will stop supplying us all of a sudden. There were other enquiries from here and they replied to those people that they are already supplying us. If they had more facilities for dragging the log, they would take the contract from others.

President.—You have given here these three classes of wood for splints, veneers and packing cases. Now I wish to know whether as regards splints you have tried all these classes of wood on any large scale.

Mr. Bawaney.—We are at present using sawbya, maulettanshe and setkadon.

Varieties of wood.

President.—Let us first confine ourselves to your actual reserve. In your reserve how many of these kinds have you got for splints?

Mr. Bawaney.—We have got all these kinds in our reserve.

President.—The names do not seem to agree. These trees that you have specified under splints are not all to be found in the concession that you have got.

Mr. Bawaney.—We wrote to the Forest Department for permission to cut these also because we wanted that these should be included in the kinds we could work and we have got a letter.

President.—Of these classes of wood under splint, which is the most common? Is it Sawbya?

Mr. Bawaney.—Sawbya, Maulettanshe and Gwe. In our forests, the first tree is the most common.

President.—Have you been using them on a large scale?

Mr. Bawaney.—No.

President.—Of these three classes you get Sawbya from the Andaman Islands.

Mr. Bawaney.—Yes.

President.—As regards the others, I take it that they are found comparatively in very small quantities.

Mr. Bawaney.—In our reserves, they are found in very small quantities.

President.—Have you got any specimens made out of these two others namely, Maulettanshe and Gwe?

Mr. Bawaney.—Yes (handed in).

President.—Out of Sawhya, Maulettanshe, Gwe, Bonmeza you can make everything.

Mr. Bawaney.—Yes.

President.—Bonmeza is a tree which is found everywhere and its quality is suitable for your purposes?

Mr. Bawaney.—Yes.

President.—Of the five kinds which are most common in your forests?

Mr. Bawaney.—In our forests the first three kinds are very common and the others not so common.

President.—As regards the rest of Burma, you can get Bonmeza in large quantities.

Mr. Bawaney.—Outside contractors supply Bonmeza as much as we like.

President.—As regards Sawhya, after how many years does it attain 5 ft. girth?

Mr. Bawaney.—The Forest Department have not paid much attention to this and so they cannot tell us exactly about that. Mr. Scott's opinion is that it would take about 7 years to attain a girth of 5 ft.

President.—What about Maulettanshe and Gwe?

Mr. Bawaney.—Gwe is a tree of rapid growth. Maulettanshe would take a little longer time.

President.—How much?

Mr. Bawaney.—I have no exact idea as to how long it would take but 15 years would be quite sufficient for any of the kinds that we are using.

Mr. Mathias.—You said that it would take only about 7 years for Sawhya to grow to 5 ft. Would that be from the time it was planted as a seedling or are you referring to the trees which you are leaving behind in your coupe?

Mr. Bawaney.—Those that we are leaving aside now would be quite ready in 7 years time.

Dr. Matthai.—I think that what Mr. Scott said was that it would take 7 years for the Forest Department to judge what exactly would be the period required for the maturity of these trees.

Mr. Bawaney.—What Mr. Scott told me was that it was his belief that in seven years time the growth would be as much as 5 ft. but that he was not quite certain about it.

Mr. Mathias.—It is not that you would be able to plant Sawhya and then after 7 years you would be able to cut it for your purposes.

Mr. Bawaney.—No.

Mr. Mathias.—Bonmeza and Pine have got to be added to the list under splints.

Mr. Bawaney.—Formerly we used Pine for splints but now that we are getting Sawhya in large quantities, we don't use it.

Mr. Mathias.—Where do you find Pine in Burma?

Mr. Bawaney.—In Shan States. The Burma Pine has got some kind of knots. If you use a pressure of 30 lbs. when boiling, then the knots become soft and the resin disappears to a certain extent, and then we can split it into veneers easily.

Dr. Matthai.—Where do you get Setkadon from?

Mr. Bawaney.—We have got it in our own forests in a small proportion,

President.—Does it grow in your reserves?

Mr. Bawaney.—Yes.

President.—Are you satisfied with the quality?

Mr. Bawaney.—If we could get that in a large quantity it would be quite as good as aspen. We have not in stock any sample matches made of this wood at present because we have no stock of this wood in the factory at the present moment.

President.—Have you been to your forest?

Mr. Bawaney.—Yes.

President.—Do these trees grow in clusters or do they grow separately.

Mr. Bawaney.—They are not systematically planted.

President.—What is your own experience.

Mr. Bawaney.—My own experience is that 10 compartments would yield about 3,000 tons.

President.—Your coupes cover the whole of the Mahuya reserve?

Mr. Bawaney.—No. 70 in Mahuya and 80 in Paunglin.

President.—Would it matter if you mixed up several varieties of wood when making matches or will you have to confine yourselves to one species of wood only at a time?

Mr. Bawaney.—We would prefer so far as possible to work on one species at a time so that we can get uniform quality. That refers to splints only. In the case of boxes it does not matter at all because these are covered with paper.

President.—Sometimes you paint them?

Mr. Bawaney.—Yes.

Mr. Mathias.—You do not use different kinds of labels for different kinds of woodsplints?

Mr. Bawaney.—We could do that if there were sufficient quantities of wood available of different kinds. At present for the full size we are using Sawbya and for half size Maulettanshe from our forest and from the Andamans, but in the Burma forests there are many varieties of wood that can be quite suitably used for matches.

Dr. Matthai.—Would it not be a disadvantage—I am not talking of your factory—to a factory if it had difficulty in getting wood of one kind but had 10 different kinds of wood for splints so that it would get varying qualities and thereby a bad reputation owing to the colour and quality of the wood?

Mr. Bawaney.—It would be possible to sell these matches but they would not command a good price.

Dr. Matthai.—That would affect them particularly in export markets?

Mr. Bawaney.—That is so. If we mix up Taungmyo, Gwe and Setkadon it would not make much difference. We have done it. We mix up Taungmyo with Maulettanshe and Bonmeza with Gwe and has not made much difference. Sawbya we have to use separately because it has got a specially glazed and wavy appearance. If we mix it with any other kind it would at once be obvious.

Continued on Tuesday, the 22nd March, 1927.

Varieties of wood.

President.—From the list supplied by you yesterday, Statement No. 12, it does appear to me that there are only about 6 varieties which you can get in large quantities and that the rest really speaking are miscellaneous species which you probably use to make up the necessary quantity.

Mr. Bawaney.—The item shown there as miscellaneous consists of the varieties of wood which we have tested from time to time.

President.—That may be true but so far as good wood is concerned they are only six in number and the rest you have only tested so far but not used extensively.

Mr. Bawaney.—What happened was that we found the first six varieties suitable for our purposes, could be had in large quantities and there was therefore no occasion for us to pay much attention to the other varieties except testing their suitability for the manufacture of matches so that we might use them whenever required.

President.—If these six classes are suitable would it not be better for the forest authorities to concentrate on the six species which have already been proved?

Mr. Bawaney.—I agree, but we have been experimenting with the other varieties and find some of these are more suitable than even Sawbya.

President.—There must be two things: first, the wood ought to be suitable and secondly, the wood must be easily procurable. It is no use getting a tree here and there which makes extra superfine matches.

Mr. Bawaney.—Of these varieties there are two which, if the Forest Department were to try, we believe they would be able to get in large quantities because the jungle Burmans with whom we have been dealing are prepared to enter into contract with us for their supply in large quantities; one of these is Taungmeok.

President.—And yesterday you also mentioned Setkadon?

Mr. Bawaney.—Yes.

President.—Do they grow in large quantities?

Mr. Bawaney.—Although they are not in large quantities in our reserve, in other places they can be found in large numbers which have been already proved. As regards Taungmeok we have heard from Burmese contractors that they grow abundantly in the Tenasserim district.

President.—How will you bring them here from Tenasserim?

Mr. Bawaney.—Up to Moulmein we can bring by water. The proposed extension of the Moulmein railway passes near by and after the extension is complete we can have the logs brought by rail.

President.—How much would it cost you to bring it?

Mr. Bawaney.—We have not yet gone into the figures as to what the cost of transport would be per ton.

President.—There is another disadvantage and that is that if you have this wood growing at such a long distance from Rangoon though the wood may be of good quality it may be expensive.

Mr. Bawaney.—But there it is very cheap and even adding the cost of transport it would pay us to get them.

President.—The royalty may be Rs. 2 to 3 less but that is not going to make a substantial difference.

Mr. Bawaney.—It would cost about 4 to 5 rupees per ton extra. We have imported large quantities of wood from Moulmein. From Martaban to Rangoon the freight is about Rs. 9-6. They charge per 100 *vis* which comes to about Rs. 2-13-6 by weight. About 1,000 tons have been imported from Moulmein. So I take approximately Rs. 5 per ton extra.

President.—But if you can get 5 or 6 varieties in the neighbourhood of Rangoon what is the point in getting it from Moulmein?

Mr. Bawaney.—Nothing except that these would make better splints.

President.—Have you made any splints out of Taungmeok?

Mr. Bawaney.—Yes. We can get Taungmeok in the forest between Moulmein and Rangoon also.

President.—What forests are these?

Mr. Bawaney.—Bilin forests.

President.—Have you got samples of Taungmeok or setkadan?

Mr. Bawaney.—No.

President.—These make 8 varieties.

Mr. Bawaney.—There is one more, No. 18 (Yemne) which is found in very large quantities in Tavoy and Mergui.

Dr. Matthai.—When you say that these trees grow in large quantities, what is your source of information?

Mr. Bawaney.—We have bought wood from there and our contractor interviews the forest people.

President.—And then there is the pine also.

Mr. Bawaney.—Pine is found in large quantities on Kalaw side. The difficulty about pine is that it takes a long time to attain the proper girth. When the present quantity is exhausted, it will take years for suitable trees to be available.

President.—You have given nine varieties and if we include pine they come to 10.

Mr. Bawaney.—Yes.

President.—The first six varieties are :—

1. Sawbya
2. Bonmeza.
3. Didu
4. Gwe
5. Letpan
6. Maulettanshe.

Mr. Bawaney.—Yes.

Dr. Matthai.—You accept the statement of the forest people that as far as your own reserve is concerned, it is these kinds of wood that predominate in your own reserve.

Mr. Bawaney.—Except Didu and Letpan which are in small quantities in our reserve.

President.—I wish to know which of these types are suitable for splints, veneers and packing cases?

Mr. Bawaney.—Bonmeza can be used for all the three purposes conveniently.

President.—Is it because of the bigger girth of Bonmeza?

Mr. Bawaney.—Yes.

President.—For packing cases you require a fairly big girth.

Mr. Bawaney.—Yes.

President.—Of these varieties Bonmeza is the only variety which can be used for all the three purposes conveniently?

Mr. Bawaney.—That is the only one which we can use conveniently.

President.—For splints which is most suitable?

Mr. Bawaney.—Bonmeza, Sawbya and Gwe, Nos. 1, 2 and 4. We place Bonmeza as the first, Sawbya second and Gwe third. Maulettanshe splints are a little harder.

Dr. Matthai.—When you find a wood good enough for splints, it should be good enough for veneers. I can understand a tree which is not good enough for splints being good enough for veneers, but a tree which is good enough for splints should be good enough for veneers also.

Mr. Bawaney.—Not necessarily.

President.—You have mentioned three varieties for splints. Are they equally good for veneers?

Mr. Bawaney.—Bonmeza, Didu and Letpan can be used for veneers.

President.—What you would ordinarily do would be to get Maulettanshe for splints and then you would try and get Didu and Letpan or Bonmeza for veneers.

Mr. Bawaney.—Yes.

President.—And then you make the packing cases out of Didu and Letpan.

Mr. Bawaney.—For packing cases we would prefer Maulettanshe and Bonmeza.

President.—Unless you get Bonmeza, you would require at least two varieties for other purposes.

Mr. Bawaney.—Yes. In Japan they make packing cases mostly of pine wood and also the boxes. They make splints from aspen.

President.—Supposing the Forest Department concentrated on these 5 or 6 varieties it is much better that you should get wood of all these varieties than that you should get pine for something and other kinds for something else.

Mr. Bawaney.—I think if the Forest Department could give us an assurance that they would concentrate on a limited number of varieties, we on our part would undertake to test all the varieties available here, report to them and on that they could concentrate on the varieties that were found most suitable. They need not confine themselves to the six varieties.

President.—The Forest Department does not carry on match business. It is for persons interested in the match business to say: "These are the woods that we have tested; they are found in such and such a place; they are good woods and can be produced in large quantities. Will the Forest authorities help us?" You don't expect them to make experiments for you. You must in the first instance find out the kinds of wood suitable for your purpose.

Mr. Bawaney.—I believe there must be many varieties of wood in the forests of Burma which would be quite suitable for the match-making industry and if the Forest Department were to make a list of all the kinds of wood available and make an estimate of the quantities available, then we will find many varieties that would be quite suitable and even without going into regular plantation for this, we may be able to get wood which will be sufficient for our requirements.

President.—It will be really a haphazard business for them to look for trees here and there and tell you. The idea is that if the industry is to be established, certain varieties of wood should be concentrated on in the more accessible areas.

I must point out to you this. To us it may sound a very big sum, but the Burma forests are very rich forests. They get a very large revenue from the more expensive classes of wood and even if Burma supplied the whole of India with the necessary match wood, it will not be much more than 100,000 tons on the present figures. This is not such a paying proposition for the forest authorities to induce them to go all over the province and make experiments for you. It is for the industry to say:

'Here are the varieties which can easily be grown. Will the forest authorities assist us in securing these varieties.'

Mr. Bawaney.—We are still experimenting with the other varieties.

President.—You have given nine varieties. They ought to be sufficient for practical purposes and if you come across any other variety which grows more easily and which is better, then of course you can draw the attention of the forest authorities. That may be a practical proposition.

Mr. Bawaney.—Yes, but as we are still experimenting with other varieties, we don't like to be definite about them. We might find some variety which would be more suitable.

President.—What do you expect the forest authorities to do whilst you are experimenting?

Mr. Bawaney.—Bonmeza we would require always. For splints we require Setkadon, Maulettanshe and Sawbya. We should like them to go on with Bonmeza for veneers and boxes and for splints with whatever varieties they find they can grow easily, out of the three others.

President.—Setkadon will have to be grown in the Tenasserim Division. Does it grow in this part of Lower Burma?

Mr. Bawaney.—We have got in our reserves too, but not in large quantities.

President.—But you have not been able to secure very much.

Mr. Bawaney.—We have got in fair quantities, but the girth is not so very good.

President.—You must remember this. Setkadon is no doubt a good tree but it takes 60 years to grow. It is not worth while to plant such a tree.

Mr. Bawaney.—So far as the wood for splints is concerned, we place Setkadon first, Maulettanshe second and Sawbya third but if it is not so very convenient to grow Setkadon they can grow any other variety which will take less time to grow.

President.—The trouble is that nobody seems to know how long these trees take to grow.

Mr. Bawaney.—That is why we too could not come to any decision.

President.—You do not know whether all these trees would grow in the same area.

Mr. Bawaney.—We cannot say definitely whether the same locality would be equally suitable for the growth of all these kinds of trees but we know that these trees grow in the same locality. The industry is still very young and we cannot get any definite information from the Forest Department as regards the growth of these trees.

President.—There are these two points. First of all, you must show that you have got sufficient quantities of wood to carry on until trees can be planted and the results ascertained.

Mr. Bawaney.—We don't think that there would be any difficulty due to the exhaustion of the forests by the time the experiments are over because even now we can get 3,000 tons a year from our own reserve and if we get the Okkan reserve for which we have applied, we would be able to get another 1,500 tons. We get our wood also from outside contractors. These contractors take out leases from Government for the reserve forests and supply us. Our contractors are willing to supply more than what we require. Then, we can get from Port Blair too. For the current year we have contracted for nearly 80 per cent. of our requirements from the Andaman Islands. So, I think, that we will be left over with a stock of two or three thousand tons if we get timber from our own reserve.

President.—You told me yesterday that you could make out of one ton of wood 156 gross including packing cases.

Mr. Bawaney.—We could make out of 75 c.ft.

President.—That is right. How much of that would you require for veneer only? How much would you require for splints only?

Mr. Bawaney.—We have not kept separate accounts for these.

President.—If it is a superior wood which can be used for splints, I take it that you won't use it for veneers. Take the case of Setkadon. At present you don't get Setkadon in large quantities. You say that it is the best wood. Why should you use it for veneer?

Mr. Bawaney.—We are not using it for veneer.

President.—Probably you want more for veneer.

Mr. Bawaney.—No, it would take much less. If you weigh both the splints and the veneers, you can get an approximate idea.

President.—I should like to get some idea as to what it really is.

Mr. Bawaney.—We have got the daily output. We will work out the figures and send them to you.

Dr. Matthai.—As regards packing cases, I take it that any kind of soft wood would be useful.

Mr. Bawaney.—Yes.

Dr. Matthai.—The kind of wood that is good enough for splints or veneers, it would be a waste to use for packing cases.

Mr. Bawaney.—Any kind of soft wood will do for packing cases.

President.—Is it not the case that from all classes of wood you get some portions which you cannot use either for splints or for veneers but which you can use for packing cases?

Mr. Bawaney.—No, these ends are only about 6" or 9" or at the most about one foot.

President.—But one foot will give you a fairly large quantity.

Mr. Bawaney.—For packing cases we require longer planks. One foot would not do. Sometimes the logs are cracked or very dry and cannot be used for match making. They can be used for making planks.

President.—For packing cases you can use any wood that may be locally available.

Mr. Bawaney.—Yes, any kind of soft wood which is not suitable for making splints or veneers can be used for making packing cases.

Mr. Mathias.—Do you use any kind of wood for making packing cases which can be used for making splints or veneers?

Mr. Bawaney.—We use for packing cases only those which are rejected.

Mr. Mathias.—Apart from rejections?

Mr. Bawaney.—We are generally able to get sufficient planks out of the wood which we reject or which may be too dry to be made into splints or veneers.

Mr. Mathias.—My point is that you would not use any wood which is actually suitable for making splints or veneers for the purpose of making packing cases.

Mr. Bawaney.—No.

Sources of timber supply.

President.—I want to consider the principal localities from which you can get the largest quantity of wood.

Mr. Bawaney.—We get a large quantity—nearly 1,200 tons—from Martaban.

President.—In the Tenasserim Division?

Mr. Bawaney.—Yes. We can get up to 4,000 tons a year from that place.

President.—What are the principal kinds of wood you can get from Martaban?

Mr. Bawaney.—Sawbys, Didu, Letpan and a small quantity of Manlet-tanahe.

President.—In 1925, you got from Toungoo about 1,900 tons.

Mr. Bawaney.—Yes.

President.—I understood that at Pinyinmana you got more of these kinds of wood.

Mr. Bawaney.—True, but we have to consider the question of contractors also. As we get better contractors at Toungoo, we get more from Toungoo.

President.—What varieties were these?

Mr. Bawaney.—Sawbya and Maulettanshe.

President.—Then, you get considerable quantities from the Promé Division.

Mr. Bawaney.—Yes, Sawbya and Bonneza we get from there.

President.—Then you have got your own reserve, and lastly you get large quantities from Port Blair, so that these four or five places are the big centres.

Mr. Bawaney.—From Myitkyina and Shan States we can get wood at Rs. 30—all charges paid at Rangoon. As we get it nearer home we don't pay much attention to getting it from those places.

Dr. Matthai.—Is it your experience that when you buy wood from contractors, they charge different prices for different kinds of wood?

Mr. Bawaney.—Lately, it has happened like that.

Dr. Matthai.—How long ago did this practice start?

Mr. Bawaney.—Six months or so ago.

Dr. Matthai.—Among the kinds of wood which you buy which is the kind for which they charge highest?

Mr. Bawaney.—Maulettanshe and Setkadon, Rs. 4 to 5 a ton extra.

Dr. Matthai.—Is it because there is more demand for these?

Mr. Bawaney.—Because we prefer this wood to any other wood we use for half size matches and we are prepared to offer a higher price for these if we can get in large quantities.

Mr. Mathias.—What is the price at which you buy Maulettanshe from contractors?

Mr. Bawaney.—Rs. 34 to Rs. 35 delivered at the works.

Mr. Mathias.—Other kinds you get at Rs. 30, do you?

Mr. Bawaney.—Yes. At about that price.

Mr. Mathias.—You say you have every reason to believe that if proper research work is carried on under the direct control of the Government, it is not impossible to locate a supply of that particular species of wood from which attractive splints can be manufactured. What reason have you to believe that?

Mr. Bawaney.—We have tried the kinds of wood that we can get in our own reserve and we have tried about 35 varieties out of which three varieties have been found quite good. The Utilization Department and the Forest Department can get all kinds of wood in Burma and so we think that when we have got three or four varieties from our own reserve there is a chance of getting more varieties from all the forests in Burma.

Mr. Mathias.—You say that even after making experiments for a considerable time you have not been able to obtain local wood quite as satisfactory as the imported wood, and therefore it appears to me that you have little reason to suppose that better wood exists in Burmah.

Mr. Bawaney.—In the course of our experiments we have come across some kinds of wood which have been found better and our experiments have not reached finality yet, so that there is every possibility that if proper research is made the Forest Department may come across a better class of wood.

Mr. Mathias.—Do you mean better quality of wood for splints?

Mr. Bawaney.—Yes.

Mr. Mathias.—What you say is really an expression of your desire—a hope—not probability at all.

Mr. Bawaney.—You may take it as a hope or anything you like but we do believe that they can find many varieties after research.

The Company's forest concession.

President.—I wish to ask you a few questions about this forest of yours. Your concession is confined to two forests, Mahuya and Paunglin?

Mr. Bawaney.—Yes.

President.—I wish to know a little about your communications. How do you bring your wood down? Are there any cart roads at all in the forests?

Mr. Bawaney.—No.

President.—As soon as the tree is felled you have got to drag it, I take it by means of elephants or buffaloes to the nearest running stream?

Mr. Bawaney.—Yes.

President.—What is the furthest distance that you will have to go?

Mr. Bawaney.—One mile.

President.—Wherever you extract the trees from?

Mr. Bawaney.—Yes.

President.—Which is the principal creek that you use?

Mr. Bawaney.—We have small streams all over the reserve from the principal river which are only used during the rains; that is up to the main stream. From there we bring them down by river to Rangoon.

President.—You mean that the streams go right through the forest?

Mr. Bawaney.—Yes there are streams running into the various compartments; there are small channels.

President.—Do you mean to say that the whole of the wood can be brought down by water to Rangoon?

Mr. Bawaney.—Yes.

Mr. Mathias.—Have you got elephants or buffaloes?

Mr. Bawaney.—We hire both.

Mr. Mathias.—Could you use tractor engines at all?

Mr. Bawaney.—If we had the assurance that we will have roads to the forests tractors would no doubt gradually come into use.

President.—I want to know the exact period during which you will be able to float the logs?

Mr. Bawaney.—June to November.

President.—After November the streams begin to dry up, do they not?

Mr. Bawaney.—The small streams dry up.

President.—For six months you can bring the logs down by water?

Mr. Bawaney.—Yes.

President.—For the remaining six months what will you do? What communication will you have as regards the Mahuya reserve? Which is the nearest point, the railhead or the riverhead?

Mr. Bawaney.—The riverhead. It would be about 3 miles above Hlaing which is tidal to Rangoon. That is 19 miles.

President.—But your compartments may be higher up. What I want to know is what is the longest distance?

Mr. Bawaney.—That would depend on how far we went further north: it would be an additional mile. In the dry season the longest distance would be 27 miles.

President.—Will you be able to cart it from the forest?

Mr. Bawaney.—Yes.

President.—You would cart it direct to Hlegu?

Mr. Bawaney.—Three miles above Hlegu, that is to Letpanway.

President.—How much would it cost you in that case? It would be about 24 miles, would it not?

Mr. Bawaney.—Yes.

President.—How much would it cost you?

Mr. Bawaney.—It would be about Rs. 7 more.

President.—Then as regards the Paunglin forest, what would you do there during the dry season?

Mr. Bawaney.—This would not be possible there.

President.—You get your coupes in both of them.

Mr. Bawaney.—We will get in compartments in both of them.

President.—You will work some in the wet season and others in the dry season.

Mr. Bawaney.—Yes. Each has got 75 compartments.

Dr. Matthai.—Do 10 compartments make one coupe?

Mr. Bawaney.—15 compartments.

President.—You will have a coupe in each forest.

Mr. Bawaney.—Yes.

President.—You work the Mahuya forest in the dry weather and the Paunglin reserve in the wet weather?

Mr. Bawaney.—Yes. Of course we would not get much extraction in the dry weather as in the rainy weather, so it would take a longer time.

Dr. Matthai.—Your arrangement with the Forest Department is that you work one coupe a year.

Mr. Bawaney.—We work any ten compartments that we want.

Dr. Matthai.—The cycle is worked that way. You can take any 10 compartments in either of the reserves in one year.

Mr. Bawaney.—Yes.

Mr. Mathias.—Out of any coupe you like.

Mr. Bawaney.—Yes. They would not give us more than 10 to work in a year.

President.—You will select them in such a way as to suit your convenience.

Mr. Bawaney.—Yes.

Dr. Matthai.—So that during the dry weather you would confine yourself to the south and during the wet weather you would confine yourself to the north.

Mr. Bawaney.—Yes.

President.—They have given an estimate of these two reserves. They contain about 98,000 tons. The kinds of wood that you want represent only a small total percentage of the timber available in the forest. There will be other classes of wood.

Mr. Bawaney.—Yes, which we don't touch.

President.—Are there any expensive classes of wood there?

Mr. Bawaney.—Yes, we have got several classes of hard wood. Nos. 1, 2, 3 and 4. There is no teak except in the northern boundary.

President.—If the forest authorities were to undertake planting in these reserves, they must work off all the wood.

Mr. Bawaney.—Not necessarily because the lower portion is what they call ever green. You will never get any teak or any other wood to grow there. The southern portion of the Paunglin and Mahuya is practically an ever green forest. No teakwood is grown there.

Mr. Mathias.—There are no hard woods there.

Mr. Bawaney.—Not in any appreciable quantity.

President.—That area can be cleared.

Mr. Bawaney.—Yes.

President.—How many acres would that make?

Mr. Bawaney.—You can take it as 150 square miles.

President.—For both reserves.

Mr. Bawaney.—That is what they have at the present time allocated into compartments. Although the reserve includes the northern portion, they have not allocated it into compartments because they say it would be absolutely impossible for us to work the match wood out of that.

President.—Because it is inaccessible.

Mr. Bawaney.—Yes.

President.—They have only given you 29 compartments.

Mr. Bawaney.—80 compartments in the Paunglin and 70 in the Mahuya.

Dr. Matthai.—The forest officer says 100.

Mr. Bawaney.—Yes. Of that only 80 will be workable.

Dr. Matthai.—Hard wood in your reserve is also being worked.

Mr. Bawaney.—Not at the present time.

Dr. Matthai.—Supposing somebody gets a lease with regard to hard woods in this reserve and he starts working would the stream get congested?

Mr. Bawaney.—Undoubtedly.

Dr. Matthai.—Would that block your traffic?

Mr. Bawaney.—To a certain extent it would.

Mr. Mathias.—That would not affect your cutting match wood next year.

Mr. Bawaney.—We have got to bring them all in one season.

Mr. Mathias.—Supposing you get a certain coupe this year and float all your wood down it is quite possible for the Forest Department to extract hard wood next year. In this way in any your flotation of timber would not be impeded unless the hard wood and soft wood were let out to two separate people at the same time.

Mr. Bawaney.—Where it would come in I will tell you. All these hard woods that grow there are not floating woods and they have got to be supported with bamboo rafts. Whereas if an ordinary match wood is cut and thrown into the stream, it will float of its own accord down to a place where it is caught. As regards the hard wood from the time it is put into the river, it has to be supported by bamboo rafts. One log will probably take the place of 3 logs so that a log of 5' girth would really require 15 feet of space to float down the stream.

Mr. Mathias.—If you are extracting at the same time.

Mr. Bawaney.—Yes, we will have to use the same stream.

Mr. Mathias.—Even if he is working in different compartments.

Mr. Bawaney.—Unless he is using a different stream.

President.—In his case it would not matter if there was some delay.

Mr. Bawaney.—Yes, whereas in our case it would matter if there was delay.

President.—If there was to be any plantation, must it be a plantation of one species of wood?

Mr. Bawaney.—Not necessarily for the simple reason that hard wood can be cut and allowed to remain, whereas as regards the soft wood we cut and bring it to the factory as soon as possible.

President.—Is there much extraction done in these forests of hard wood?

Mr. Bawaney.—Not in our reserves.

President.—Nobody is extracting anything.

Mr. Bawaney.—No.

President.—Supposing it was a case of planting would the other trees have to be removed.

Mr. Bawaney.—Not necessarily.

President.—Have you got space to plant?

Mr. Bawaney.—If we cut down 20,000 trees.

President.—You must get at least 20 to 30 tons per acre. To get that quantity you must have more space and that means you must remove the other timber.

Mr. Bawaney.—Undoubtedly. You are not going to allow the trees that still exists in the forest to remain there.

President.—Supposing now the Government said that they were going to plant in this particular reserve, how many years do you think it would take to clear the forest of the other classes of wood which are not suitable for match-making?

Mr. Bawaney.—That would be impossible to say for the simple reason that at the present time in the forests there exists according to the data—working plans—trees of 2' to 2' 6" girth, 3' to 3' 6" girth, 4' to 4' 6" and 5' girth of all species. But the arrangement with the Government is that we will not cut timber under 5' girth. But there are thousands of trees all below 5' girth which on the cycle rotation of the next 15 years would attain 5' girth, because once you finished a compartment, they don't allow you to go into that for the next 15 years.

President.—What it means is this that until all the trees have grown and are cut down, there cannot be a really complete plantation.

Mr. Bawaney.—At present we are ensured a supply for 45 years in the forests with the existing trees including those below the girth limit.

President.—You may have it for yourselves but I am talking of a plantation for the whole industry.

Mr. Bawaney.—There are supplies at the present time which would give us 3,000 tons a year for 45 years.

President.—But then that would only give you 3,000 tons per year.

Mr. Bawaney.—The other forests will also give us an equal quantity.

President.—If the policy of plantation is adopted, then unless all these other trees are cut down or you wait 45 years, the plantation on a large scale cannot take place.

Mr. Bawaney.—I don't think Government work in that way. Before they start planting again they don't fell all the big trees. As they fell, they plant.

President.—In this case we want a certain quantity of wood not only for you but for other people.

Mr. Bawaney.—The working plans officer goes through the area we have finished every 5 years and sees exactly what he can plant.

President.—That is perfectly true. I understand by a plantation that you must as far as possible have these particular varieties only in that forest. Take a rubber plantation. You don't have anything else. Rubber trees must be planted a certain number of feet apart. If plantation on that principle were to be undertaken, then either the Government have to wait for 45 years until all these trees were worked or they must cut down the other trees whether they are ripe for cutting or not and start plantation.

Mr. Bawaney.—I understand from the Conservator, Utilisation Circle, that if Sawhya and Maulettanshe were planted on a clear area and so much apart instead of as it is just now, the duration to attain a growth of 5' would be about 16 to 18 years, but allowing it to grow as it is just now in the forests, it generally takes 35 to 45 years.

President.—I am asking you for information just now. The forest authorities may like to have an easier road, but that is another matter. What I want to know is whether it is possible by clearing the forests to plant these trees like a regular plantation.

Mr. Bawaney.—I cannot vouch for what the Forest Department would do.

President.—I am asking you.

Mr. Bawaney.—My idea is they will go on planting where we have extracted,

President.—You would have as many trees as you have cut.

Mr. Bawaney.—Quite so.

President.—That is not sufficient.

Mr. Bawaney.—They still go on cutting out other trees. They cut down hard woods.

President.—You have got 150 square miles out of which you get 3,000 tons a year. That is not good enough.

Mr. Bawaney.—Only of our species, but there are other kinds.

President.—But I am not talking of the other kinds. We are concerned with the Match industry.

Dr. Matthai.—What we are concerned with is not the regeneration of an area which you are working now but a fresh plantation altogether. Is it possible in Burma to plant an area which has been completely cleared with only one kind of match wood?

Mr. Bawaney.—Certainly it is possible.

Mr. Mathias.—I understand the system of clear felling even in the case of the more valuable wood such as teak has not been approved by the Forest Department.

Mr. Bawaney.—So I understand. They never wait for the whole area to be entirely cleared. They will just go on planting.

President.—Until eventually they are all match wood trees.

Mr. Bawaney.—That is in ever green areas where match wood or soft wood would grow.

President.—I understood you to say that Mahuya is an ever green area.

Mr. Bawaney.—Yes, there is no teak in it.

President.—That would lend itself to plantation more easily.

Mr. Bawaney.—Yes.

President.—As regards Paunglin?

Mr. Bawaney.—The northern portion is not an ever green area.

President.—How much does that represent?

Mr. Bawaney.—80 to 40 miles.

President.—Out of how many miles?

Mr. Bawaney.—70 miles.

President.—Then there is the Okkan forest (Tharrawaddy division.) That is in the north.

Mr. Bawaney.—Yes.

President.—There is also a forest in the south.

Mr. Bawaney.—Nothing south of Mahuya, but there is in the south east.

President.—Does that contain an ever green area?

Mr. Bawaney.—It is an ever green area.

President.—The whole of it.

Mr. Bawaney.—Not much teak is growing there.

Dr. Matthai.—How many miles is that?

Mr. Bawaney.—It is about 200 miles.

Mr. Mathias.—In this ever green area provided the soil is suitable for match wood trees, the production per acre could be very much increased by natural regeneration assisted by extraction of non-match wood trees, is that so?

Mr. Bawaney.—Undoubtedly.

Mr. Mathias.—It will not be really necessary after extracting the hard wood to plant the soft wood trees.

Mr. Bawaney.—No.

Dr. Matthai.—From your point of view it will be more economical to extract where the match wood is growing.

Mr. Bawaney.—Yes.

Mr. Mathias.—Why?

Mr. Bawaney.—Because otherwise there would be competition between one man working timber worth Rs. 100 a ton and another working timber worth Rs. 80 a ton.

President.—The creek in Okkan goes into the Hlaing river which falls again into the Rangoon river.

Mr. Bawaney.—Yes. The waterways are very suitable, but unfortunately for only six months in a year?

President.—That would apply to the whole area.

Mr. Bawaney.—Practically to the whole area in so far as rafting is concerned.

President.—Then you will have to transport by land a considerably long distance before you reach the creek in Okkan.

Mr. Bawaney.—But you can do it.

President.—I am talking of the dry weather.

Mr. Bawaney.—It would not be feasible at all.

President.—What would you do as regards the other areas in the dry season?

Mr. Bawaney.—As far as Okkan is concerned, we would have to close down. It would be too far away from a railway head.

President.—What would you do?

Mr. Bawaney.—All these people can drag the wood to the railway head. The Government's policy has always been to give the small people the easiest to work and the big people the hardest to work.

President.—They are difficult to work in the sense that they are hilly.

Mr. Bawaney.—No, it is just the same ground.

President.—I have some recollection that some of the forest officers told me that these trees grew on slopes.

Mr. Bawaney.—Not on the top, but just on the bottom slope.

President.—That applies to all these soft woods?

Mr. Bawaney.—More or less and especially in the Mahuva it is all flooded ground.

Mr. Mathias.—What about Letpan?

Mr. Bawaney.—Letpan would only grow on the banks of streams and more so in the salt water swamps.

President.—You pay a high royalty of Rs. 12-8-0 a ton for your wood.

Mr. Bawaney.—Yes. Government asked for a tender and we submitted our tender offering to pay a royalty of Rs. 12-8-0 per ton.

President.—Don't you think that by offering to pay a higher royalty you have made the cost of wood higher for other people?

Mr. Bawaney.—When we went into the figures, we calculated that it would cost about Rs. 17-8-0 for extracting and bringing to Rangoon. On that basis we offered this royalty to Government.

President.—Now what is your expense?

Mr. Bawaney.—Later on we found that we were wrong in our calculations regarding expenses. It costs more now than what we thought it would cost. It comes to Rs. 22-8-0 for extracting and bringing it to Rangoon.

Dr. Matthai.—It is not because you anticipated any special competition from anybody else that you offered to pay the high royalty of Rs. 12-8-0.

Mr. Bawaney.—That was one of the reasons. We wanted to secure the forest. We thought there might be other people who would be tendering for

the forests. At that time we were getting wood at Rs. 30 per ton from outside. We calculated that our charges would come to Rs. 17-8-0 and so we offered to pay the balance of Rs. 12-8-0 as royalty.

President.—You were prepared to pay the whole of the margin.

Mr. Bawaney.—Yes.

President.—Besides yourselves, there is no one here who is manufacturing matches who has got forests.

Mr. Bawaney.—No, but the Swedish Trust people also tendered for the forests.

President.—Did they?

Mr. Bawaney.—Yes.

Plantation of match wood species.

President.—You have given us an estimate prepared by Mr. Robertson for planting Bonmeza.* Mr. Robertson is the Utilisation Officer.

Mr. Bawaney.—Yes, he is called Conservator, Utilisation Circle.

President.—Was it prepared at your suggestion or how did it come about?

Mr. Bawaney.—This was prepared at our suggestion. I had to go and consult him every now and then in connection with our match wood and when we found that Bonmeza was suitable I asked him to give us an estimate.

President.—Is it an estimate for plantation on a clear felled forest or is it an estimate for plantation in the ordinary way where there is room?

Mr. Bawaney.—It is on the basis of clearing the forest and starting a new plantation.

President.—Is there any new clear felled forest in the vicinity of Rangoon?

Mr. Bawaney.—Not so far as I know.

Dr. Matthai.—This planting charge that Mr. Robertson gives of Rs. 20 per acre for 7 years, includes not merely planting but also clearing.

Mr. Bawaney.—Planting, supervising and everything. I think that it includes the clearing charge but for planting match wood trees, the clearing has not to be done on the same scale as for other plantations.

President.—Have you any personal experience of planting at all?

Mr. Bawaney.—No.

President.—We will have to question Mr. Robertson on this point. Do you consider the estimates of Mr. Robertson as reasonable?

Mr. Bawaney.—Yes.

President.—Of course he calculated that the cost per ton would be Rs. 2-8-0, that is to say to meet Government's out of pocket expenses.

Mr. Bawaney.—It allows for compound interest on capital invested from the time of plantation to the time of extraction.

President.—According to this, on an investment of Rs. 46 Government will get Rs. 120 royalty for the wood alone.

Mr. Bawaney.—Yes.

President.—Would you consider that a fair return on capital?

Mr. Bawaney.—Yes. We look to that Rs. 2-8-0 only.

President.—That of course includes the price of the land. Have you any idea as to what the value of the land would be in the forests if you were to buy? More or less this would be treated as waste land.

Mr. Bawaney.—Government allows waste land to be occupied free of charge. The land has no value. Government can get no revenue out of it.

* Mr. Robertson does not recollect having made this estimate.

Extraction and transport costs.

Dr. Matthai.—If you take Rs. 35 as the cost at the factory and if from that you deduct the royalty, it leaves Rs. 22-8-0 for the cost of transport and extraction. How is it divided between extraction and transport?

Mr. Bawaney.—About half each way.

Dr. Matthai.—That is to say, the transport would cost as much as extraction.

Mr. Bawaney.—Yes, because transport includes the cost of establishment.

Dr. Matthai.—Do you do your own extracting? Have you got your own cutters, elephants, etc.?

Mr. Bawaney.—We hire the elephants and buffaloes but we have our own men. Extraction includes the cost of dragging the trees from the place where they are felled to the river bank.

President.—What is the average cost per ton?

Mr. Bawaney.—About Rs. 9 from the stump to the stream bed.

President.—After that, what costs have you to incur?

Mr. Bawaney.—There is rafting.

President.—What does that cost?

Mr. Bawaney.—It costs about Rs. 9½ for rafting from the stream bed into which it was dropped right down to Rangoon.

President.—That comes to Rs. 18-8-0 only.

Mr. Bawaney.—Yes.

President.—How do you account for the balance of Rs. 4?

Mr. Bawaney.—That covers the establishment charges.

President.—Would it be possible to do this work on the contract system?

Mr. Bawaney.—It is done on a contract system.

President.—Can you tell a man 'bring this down and we will pay you so much'?

Mr. Bawaney.—That is what we do.

President.—You have accounted for Rs. 9 and Rs. 9-8-0.

Mr. Bawaney.—Yes, the balance, *viz.*, Rs. 4, is what we give to the contractor as his profit.

President.—You pay Rs. 22-8-0 in all.

Mr. Bawaney.—Yes.

Dr. Matthai.—Then your wood cutters are employed by your contractors.

Mr. Bawaney.—Yes. There are different men to whom we allot the compartments.

President.—At what stage does the measurement take place?

Mr. Bawaney.—At Hlegghu.

President.—Do you meet the big stream there?

Mr. Bawaney.—First of all from the small stream where the logs are dropped into the river bed, they come down in small rafts of 5 logs to a raft until it comes to Phaunggyin where they are made into rafts of 30 logs each and brought to Hlegghu. There the line is perfectly clear and they are made into rafts of 100 to 120 logs. Thus, there are three rafting contractors.

President.—Do you enter into separate contracts or do you give Rs. 22-8-0 to one man?

Mr. Bawaney.—We give Rs. 22-8-0 to one man.

President.—And that man allocates the work to three different persons.

Mr. Bawaney.—Yes.

President.—Then, as extraction becomes more difficult, you will have to pay more.

Mr. Bawaney.—No, because it is a fixed rate.

President.—It cannot go on for ever.

Mr. Bawaney.—In this area, the cost of extraction is the same because dragging has to be done for only one mile and the floating charge for the remaining distance is practically the same.

Mr. Mathias.—During the hot weather, what do you do?

Mr. Bawaney.—We have separate contracts for that.

Dr. Matthai.—You make your contracts for one year, don't you?

Mr. Bawaney.—Yes.

President.—Would the same man do it for you?

Mr. Bawaney.—Yes.

President.—You will have to pay him a little more, I suppose?

Mr. Bawaney.—Yes, Rs. 7 or Rs. 8 extra.

President.—So that in the hot weather the cost would go up by Rs. 7 or Rs. 8, making a total of about Rs. 42.

Mr. Bawaney.—Yes.

President.—At other times, the cost will be only Rs. 35.

Mr. Bawaney.—Yes.

President.—The average would work out at about Rs. 40 for the whole year.

Mr. Bawaney.—Yes.

Mr. Mathias.—You say in answer to the questionnaire that you find the supply of wood constant in respect of quality. I have heard it alleged as regards the quality of the trees used for making splints that some trees growing on the hills for instance will yield splints of very good quality while the splints made for those growing a little lower down are brittle. Have you found anything like that?

Mr. Bawaney.—We have not experienced this difficulty although it is possible that if the soils is different the quality of wood may vary also.

Mr. Mathias.—You have had not complaint about the varying quality?

Mr. Bawaney.—No.

Dr. Matthai.—You have told us of a small concession that you got from the Burma Railways. What was this concession?

Mr. Bawaney.—On the Shan State Railways the freight charges are double of what they are on the other lines, but when we were getting timber from the Shan States in 1925 the Burma Railways charged us at the ordinary rates instead of the double rate on the Shan State Railways.

Dr. Matthai.—Have you experienced any difficulty as regards wagon supply?

Mr. Bawaney.—During the paddy season we have some difficulty in getting wagons.

Dr. Matthai.—It has not inconvenienced you to any great extent?

Mr. Bawaney.—We were inconvenienced when we were getting our supplies by rail but at present we are not getting by rail. There was difficulty as regards the supply of cranes also. The Burma Railways have not got cranes at all stations and when bringing wood down we could not get cranes. We had to wait till it had finished one station then it came to another and so on to us.

Other Raw Materials.

President.—I want to know whether there is any big organization which deals in most of the principal raw materials or do you have to buy them from different countries and different firms? Are any of these materials controlled by the Swedish combine?

Mr. Bawaney.—The Swedish combine tried to corner certain of the materials, they did not succeed but the result was a rise in prices.

President.—In the list that you have given us of the other raw materials I do not find any reference to Sweden except in connection with blue match paper and red match paper?

Mr. Bawaney.—The reason why their name does not appear in connection with other raw materials is that they themselves do not produce these. What happens is that they supply 50 per cent. of the matches required all the world over and they tried to corner these materials wherever they were produced. In France, for instance, they began to purchase Amorphous Phosphorus and in Germany Chlorate of Potash and tried to corner these because they can afford to purchase their requirements of a whole year at one time.

President.—In these various articles that you have mentioned are there any which are only used in the manufacture of matches?

Mr. Bawaney.—Amorphous Phosphorus.

President.—Are you sure that it is not used for anything else?

Mr. Bawaney.—So far as I am aware it is not used in any other industry.

President.—Where is it prepared?

Mr. Bawaney.—In France but now it is also being manufactured in Great Britain, Germany and Japan.

President.—What is it made of?

Mr. Bawaney.—From bones.

President.—Has anybody got such control over any of these articles that unless you buy it from him the manufacture of matches would be stopped?

Mr. Bawaney.—No.

President.—It may be that this phosphorus is used only in the manufacture of matches and that somebody has got more experience and can manufacture it cheaper than other people, but you do not suggest, that it is manufactured only by one particular firm or one particular country?

Mr. Bawaney.—No.

President.—These other articles are used for other purposes also?

Mr. Bawaney.—Yes.

President.—So that there cannot be much cornering in these?

Mr. Bawaney. No.

President.—We asked you for prices you do not tell to what year these prices refer. In what year did you buy these articles?

Mr. Bawaney.—If you want figures for each year with dates we will give it. What we have given you are the minimum and maximum prices from 1924 to 1926.

President.—Give us the most recent and the earliest year, say, 1924. Give us also the rate of exchange. For the earlier period you may have to give Indian exchange because in 1924 it had not stabilized at 1s. 6d. From 1925 you may assume the exchange at 1s. 6d. You have given prices in *yen*; you must convert them into rupees. We do not know what this 100 *kins* amounts to and what are *catties*?

Mr. Bawaney.—We will convert these into rupees and send you a fresh statement.*

Dr. Matthai.—The figures that you give in Statement A in the last column are all in lbs. that is to say if you take a thing like Antimony Trisulphide for which you give a quotation in Statement B per 100 Kg. do you convert it into lbs. here in Statement A?

Mr. Bawaney.—Yes.

President.—What we want is the price per ton or lb. or whatever unit you use for purchasing; that is as regards statement B. As regards A we want the total value; take Amorphous Phosphorus for instance. You must give the total for a particular year. Give us the figure for three periods, for the

* Supplementary Statement No. 10.

year 1924, then the complete year 1926 and then your latest quotation. You can give figures for the whole calendar year January to December.

Mr. Bawaney.—We shall let you have it.*

President.—In statement A what I want to find out is the total value. There are two things we want to ascertain: the duty you pay to Government on these materials and the amount you consume.

Mr. Mathias.—Can you tell me why you get your glass powder from Germany instead of powdering it here?

Mr. Bawaney.—The quantity we require is not big and for a small quantity the cost of powdering it here will be higher.

Mr. Mathias.—Your biggest item in materials is paraffin wax. Can't you get it in Burma? I should have thought that in a place like Burma you ought to be able to get it locally.

Mr. Rashid.—The B. O. C. and the I. B. P. are generally manufacturing the paraffin wax at a melting point of 130 degrees suitable for making candles. What we require is a melting point of 108 degrees and we find it cheaper to import;

Dr. Matthai.—They do make it, but you find it more expensive.

Mr. Rashid.—They generally make a higher grade.

Dr. Matthai.—They can make the quality you want.

Mr. Rashid.—Yes.

Mr. Mathias.—Why do you buy Japanese iron oxide when you can buy it here?

Mr. Rashid.—We have not made proper enquiries in India. We have not gone into the question very carefully.

Dr. Matthai.—I find in the representation that we have had from another match factory in Rangoon they seem to get their glass powder, glue and paraffin from India.

Mr. Rashid.—The glue is not properly refined and we find the imported article suitable for our purpose.

Dr. Matthai.—You have not considered the question very fully.

Mr. Rashid.—We have not gone deeply into the matter.

President.—I wish to know whether in making use of these chemicals, you use the ordinary formula or have you made any special formula of your own.

Mr. Rashid.—We have made a special formula of our own.

President.—I do not wish to know your formula, but what I wish to know is wherever you make an alteration in the formula, can you give me the reason for it?

Mr. Rashid.—We make an alteration when we receive a consignment of any chemicals different from what received before. For instance our formula calls for one lb. of manganese dioxide, to contain so much of manganese and so much of oxygen. After receiving the consignment instead of 98 per cent. of manganese dioxide, it contains 55 per cent. So inevitably we should have to take instead of 1 lb. and 12 ounces.

President.—There are two things. The first thing is the wood. The second thing is the climatic consideration. As regards the wood did you have to make any serious alteration in the usual formula?

Mr. Rashid.—No. We don't have to make any alteration as regards the wood.

President.—In your chemical composition?

Mr. Rashid.—The different qualities of wood do not affect the chemical composition.

President.—As regards the climate?

Mr. Rashid.—We find that our climate is rather damp and so we have to make some special composition that will resist the atmospheric influence.

President.—You want to make the glue a little more waterproof.

Mr. Rashid.—Yes.

President.—For that reason you have got to make your own formula.

Mr. Rashid.—Yes, it is generally not known to all chemists. We have had to make some researches and formulate a certain recipe.

President.—Do you have to go on altering your formula according to the weather or what do you do?

Mr. Rashid.—Once having made a formula, we don't have to alter the formula, but we have to alter the percentage of different chemicals when they are of different strength.

President.—If you have got the chemicals of the same strength, then you won't make any alteration.

Mr. Rashid.—No.

President.—Do you use the same formula throughout the year?

Mr. Rashid.—We make uniform chemical composition throughout the year, but during the dry weather we make it a little less damp proof.

President.—I understand that you had some training in America.

Mr. Rashid.—Yes.

President.—Were you in a match factory?

Mr. Rashid.—I studied chemistry and specialised in match making, tanning etc.

President.—What I wish to know is, is there any process connected with the raw materials which is of special difficulty as regards India?

Mr. Rashid.—I don't think so. There is no difficulty at all in India in the matter of composition.

President.—It has been claimed that foreign matches are superior, because the composition is better, the heads remain in good condition longer and they strike better.

Mr. Rashid.—I don't quite agree with that information, because I find that India has all the materials that we require. For instance I am under the impression that Burma contains the largest deposit of zinc and lead in the world. These are exported to different countries now.

President.—I am not talking of the minerals just now. What I am talking of is the process. In the process of manufacturing matches so far as chemicals are concerned, is there any difficulty experienced in India which you have to get over?

Mr. Rashid.—The only difficulty the Indian manufacturer experiences is in making a damp proof composition, but those who understand how to make damp proof composition are not likely to have any difficulty whatsoever.

Mr. Mathias.—You understand how to make damp proof composition.

Mr. Rashid.—I am supposed to know that.

Dr. Matthai.—That is largely a question of glue.

Mr. Rashid.—Yes.

President.—You keep the glue in the proper state of consistency.

Mr. Rashid.—In the proper state of specific gravity and also we add to it a certain chemical which is both soluble in spirit and also in water so that when it dries, it takes a coating of damp proof surface. Chlorate of potash when it is exposed to moist air absorbs water from the atmosphere. In order to prevent that, we have to devise some means of making a suitable glue. Glue must receive some water proof coating in order to resist the atmospheric influence.

Dr. Matthai.—You have a laboratory in your factory.

Mr. Rashid.—Yes.

President.—Do you mean to say that you have discovered the process of making the composition?

Mr. Rashid.—Practically so.

Dr. Matthai.—Have you got any assistants in your laboratory?

Mr. Rashid.—Yes, 2 assistants.

Dr. Matthai.—Are they chemists locally trained?

Mr. Rashid.—They have been employed here locally and I have trained them.

Dr. Matthai.—Did you have any training in chemistry before you went to America?

Mr. Rashid.—No.

Dr. Matthai.—How many years were you there?

Mr. Rashid.—4 years.

Dr. Matthai.—After your training in the University, you went into a match factory.

Mr. Rashid.—No. I was engaged by Mr. Jemal in the research work of mining.

Dr. Matthai.—Where was that?

Mr. Rashid.—In different places.

Dr. Matthai.—How long have you had practical experience in chemistry?

Mr. Rashid.—4 years in all.

President.—About impregnating matches, it is claimed that Indian matches glow too much. That is a defect. As regards that have you succeeded in getting over the difficulty?

Mr. Rashid.—Without impregnation it will glow, but after properly impregnating I find that our wood is better than aspen or (pine) of foreign countries. I find that Swedish woods do not absorb the chemicals so much as the wood of Burma.

President.—Which wood do you mean?

Mr. Rashid.—I mean sawbya or any wood of Burma. When we impregnate them the heads do not break.

President.—It takes in more chemical.

Mr. Rashid.—Yes, it gets strongly impregnated. If we want the splints impregnated, we can use a little more impregnating solution and make it stronger and it will never glow.

Mr. Mathias.—If you impregnate too much.

Mr. Rashid.—If you impregnate too much, it would not burn at all.

President.—Have you discovered the proper formula for that?

Mr. Rashid.—Yes, we have given you samples.

President.—You don't say on the labels that you have impregnated the matches.

Mr. Rashid.—We don't sell impregnated matches. I think there is not much demand for it. I have not received any instructions to make impregnated splints.

President.—Does it add very much to the cost?

Mr. Rashid.—The impregnation does not cost much.

President.—Does it delay the process?

Mr. Rashid.—Very little, but we have to make an arrangement so that it won't be delayed.

President.—At what stage do you impregnate?

Mr. Rashid.—Between chopping and drying. Immediately we chop the splints in wet condition we soak them in the impregnating solution and dry them.

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Mr. Mathias.—You have an impregnating tank.

Mr. Rashid.—Yes.

Dr. Matthai.—Can you say approximately how much it increases the cost?

Mr. Rashid.—As. 6 per 50 gross.

President.—There are certain articles here which may be hereafter manufactured in the country, such as printing ink, printing paper, match paper and so on if there was a bigger demand.

Mr. Rashid.—We have not gone deeply into the matter of making our own chemicals here and if we go into this matter, there will be no difficulty in getting all the chemicals, as for instance zinc oxide, lead oxide and manganese dioxide.

President.—Nobody is going to start the manufacture of chemicals merely for the match industry. These chemicals are used in many other industries and it is only when the demand for them increases, they can be manufactured in the country.

Mr. Rashid.—Nobody has taken up this matter, otherwise there is a demand for these chemicals both for painting and match works.

President.—In connection with the Match industry after all the quantity required is very small and it is not worth while going into the question as to whether we should manufacture chemicals or not. Is it not generally true that in most countries where matches are manufactured, they don't produce all the chemicals?

Mr. Rashid.—I am not sure about that.

President.—Take the case of Sweden. Does it produce all the chemicals?

Mr. Rashid.—Yes.

President.—Does it manufacture all the chemicals in the country?

Mr. Rashid.—Yes.

President.—Our information is rather different.

Mr. Rashid.—Japanese do not import anything. It depends upon the prices. We don't have to import paraffin, but we find if somebody sells paraffin one pie cheaper, we buy. Generally speaking we should have no difficulty in getting all the materials required in India. The question of prices is the chief thing of which I am not quite sure.

Dr. Matthai.—When you sell matches locally in Burma, you enclose them in zinc sheets.

Mr. Rashid.—Zinc sheet tins. We line the case inside with zinc sheets.

Dr. Matthai.—The wooden case you use for export—I am talking of matches sold in Burma. How are they packed?

Mr. Rashid.—That is encased in a zinc case and six of these cases may be packed in each wooden case.

President.—In Burma I understand that you simply sell in zinc cases. In India you have a big wooden packing case which is lined with zinc sheets.

Mr. Rashid.—Yes.

President.—In Burma you will probably have to use more zinc.

Mr. Rashid.—Yes.

President.—In India you have zinc and packing case. Would it very nearly cost the same?

Mr. Rashid.—Yes, it comes to practically the same thing, because we pay more freight. The cost of the zinc in the zinc tin and the cost of the wood in the wood case counterbalance each other.

Mr. Mathias.—Why can't you use tin plates instead of zinc plates? What is the reason?

Mr. Rashid.—I cannot give any reason except that all have been using that article to make cases air tight.

Mr. Mathias.—Is there any chemical reason why tinplate is not used?

Mr. Rashid.—Tinplate gets more easily oxidised. Tinplate is steel coated with tin. It gets rusty. The zinc sheet won't corrode.

Mr. Mathias.—These tins are required to be kept for long periods.

Mr. Rashid.—Yes.

Labour.

President.—As regards the general conditions of labour in Burma in most industrial concerns, in the bigger towns at any rate, more Indian labour is employed than Burmans?

Mr. Bawaney.—That is so.

President.—For the more strenuous forms of labour, it is not easy to obtain Burmans.

Mr. Bawaney.—That is so.

President.—That is as regards factory labour. But as regards other labour—for instance in the fields and in the forests—you employ Burman labour.

Mr. Bawaney.—That is so.

President.—In your factory I noticed that there were quite a large number of Burmese women.

Mr. Bawaney.—Yes.

President.—What I wish to understand is—have you got these Burmese women on your regular staff or are they doing work by the piece.

Mr. Bawaney.—They are paid so much per unit. About 10 per cent. of the Burmese employees are salaried employees and others are employed on the contract basis.

President.—Taking the whole labour together, what percentage would be your regular staff?

Mr. Bawaney.—About 55 per cent.

President.—The remaining 45 per cent. would largely consist of Burmese women.

Mr. Bawaney.—Yes.

President.—In the other 55 per cent. how many per cent. would be Burmans?

Mr. Bawaney.—In the proportion of about 45 Indians to 10 Burmans.

President.—In what form of labour or in what class of work do you employ Burmans?

Mr. Bawaney.—Mostly on light work such as box filling, labelling, box making machines, etc.

President.—That work can be done by women.

Mr. Bawaney.—Yes.

President.—Do you employ a man for the same sort of work as can be done by a woman?

Mr. Bawaney.—Yes.

President.—You don't employ Burmans for any strenuous work.

Mr. Bawaney.—For heavy work, we don't employ Burmans. They cannot manage the work. They get tired soon.

President.—From what parts of India, do you get Indian labour?

Mr. Bawaney.—From Madras, Orissa, and Central India.

President.—By Central India, do you mean the Central Provinces?

Mr. Bawaney.—The United Provinces and the Central Provinces.

President.—I suppose for mechanical work, you have to get men from the United Provinces.

Mr. Bawaney.—Yes, especially on the frame filling work. On the peeling work, we employ people from Orissa.

President.—Is peeling work more strenuous?

Mr. Bawaney.—The frame filling work is also equally strenuous.

Dr. Matthai.—How many skilled labourers you have in all?

Mr. Bawaney.—I should like a better definition of skilled work before I can reply to that question.

Dr. Matthai.—Is there any kind of work in your factory for which it would be impossible for you to recruit a raw hand?

Mr. Bawaney.—A new man can do the work but he won't be efficient.

Dr. Matthai.—How many people are employed on the machines?

Mr. Bawaney.—About 75 per cent. of the salaried employees.

Dr. Matthai.—They must be fairly skilled.

Mr. Bawaney.—They require some knowledge and practice of the work.

President.—Is there any process in the manufacture of matches where really skilled labour and long training are necessary? It is purely mechanical. It is more practice than anything else.

Mr. Bawaney.—On all machines, the more experience a man has, the more efficient he is.

President.—It is all repetition work. One man does not have to attend to half a dozen machines simultaneously.

Mr. Bawaney.—They are to learn only about the machine which they attend to.

President.—One particular workman would attend to one machine and one particular part of it, is not that so?

Mr. Bawaney.—Yes.

President.—So that the training required will not be either long or difficult.

Mr. Bawaney.—No. They have to know everything about the machine which they are working. They must know how to set the machine otherwise the work would not be done properly.

Dr. Matthai.—Generally it is true, is it not, that the match machinery is more automatic than other machinery?

Mr. Bawaney.—Yes.

Dr. Matthai.—This particular kind of machinery—Roller's Machinery—is simpler than any other match machinery.

Mr. Bawaney.—Yes.

Mr. Mathias.—Do you find the Burmese labour particularly adept in those kinds of work which require delicate or rapid handling?

Mr. Bawaney.—Yes.

President.—Especially the women?

Mr. Bawaney.—Yes, they can do better the kind of work which requires delicate hands to do.

President.—When you say that they must know how to set up the machinery, what do you mean?

Mr. Bawaney.—They must know how to feed the machine. The mechanical portion of the work is done by the fitter.

Mr. Mathias.—That is a matter which is easily learnt.

Mr. Bawaney.—Yes. They have to keep their eyes on three or four places. They must know how to handle the machine. If the paper is not being fed properly and if a man goes and attends to that, the veneer may go wrong in the meantime. He must have a quick eye to attend to all these things. It requires some experience.

President.—The machine is easily stopped.

Mr. Bawaney.—Yes.

President.—So, there is no difficulty as regards that.

Mr. Bawaney.—Quite.

President.—He has not got to do anything whilst the machine is in motion. The machine can be immediately stopped, if necessary.

Mr. Bawaney.—When the girl is a new hand, the fitter shows her how to set it right if anything goes wrong but when she is properly instructed, she can attend to the machine herself when the machine is in motion.

Wastage of material.

President.—At the beginning, what sort of wastage took place, what was your difficulty? We will start from peeling. What I want to know is this. Supposing you have untrained labour what would happen in the matter of peeling?

Mr. Bawaney.—If the machine is not properly set, the veneer would not be smooth and even. The thickness would vary.

President.—The knife would be set by somebody who understands that and not by the man who attends to the machine.

Mr. Bawaney.—The operator has to attend to that because the knife moves away every now and then.

President.—Don't you have a mechanic to attend to that?

Mr. Bawaney.—It does not require a mechanic to attend to that. The only mechanical knowledge required is how to set the pressure bar. There are screws by which it can be set. There are knives which cut grooves and if these are not properly set, the grooves won't be cut.

President.—Did you have much difficulty in training the men?

Mr. Bawaney.—No.

President.—On what part of the process you found the greatest difficulty in training your labour?

Mr. Bawaney.—In the packeting machine and box making machine.

President.—What do you mean by packeting machine?

Mr. Bawaney.—The machine in which packets are made. As regards box making, we had, in the beginning, a wastage of about 40 per cent. in making the inner and outer portions of boxes.

President.—Owing to what?

Mr. Bawaney.—Sometimes the paper would be on one side. Sometimes the paper would not be properly pasted. Instead of folding it in one way, they would fold it in the wrong way. In that case, the veneer would break. Sometimes the paste would not be sufficient for paper to stick. For 40 machines we cannot have as many fitters. We have two fitters. If while they are engaged a machine goes wrong, that machine has to be stopped.

President.—Do you mean to say that 40 per cent. of the boxes that came out of the machines were useless?

Mr. Bawaney.—Yes, in the beginning.

President.—What is the wastage now?

Mr. Bawaney.—About 15 to 18 per cent.

President.—What ought to be the wastage?

Mr. Bawaney.—It should not be even 5 per cent. if the workmen know their work properly.

President.—Do you expect to reach that?

Mr. Bawaney.—Yes. Day by day our workmen are getting better. The output also increases and the wastage decreases.

Wages.

President.—As regards wages what you say is not very clear. You say males earn on the average Re. 1-4-0 and the females Re. 1. Do you pay them by the piece?

Mr. Bawaney.—Most of the women are piece workers and their average earnings come to about Re. 1 a day.

President.—You have about 25 working days in the month?

Mr. Bawaney.—Yes.

President.—Do you get them to work for 25 days in the month?

Mr. Bawaney.—On the average 22 days a month. They attend *pwes* and so on now and then and when they have money in hand they get indolent and are not very regular in their attendance. We have therefore to employ 600 women where we can do with 500 only.

Mr. Mathias.—How much can a really clever girl make by piece work a day?

Mr. Bawaney.—One by way of inducement to produce more work we had a competition and distributed a gold and a silver medal to the best girls and at that time one girl made Rs. 7 and the second girl Rs. 5.

President.—Afterwards did you find any such results?

Mr. Bawaney.—They cannot sustain their efforts. They come at 10 A.M. and go at about 4 P.M. and their habit is to waste time in smoking and gossiping.

Dr. Matthai.—If you work to capacity would it be necessary for you to increase your labour proportionately?

Mr. Bawaney.—Only in the hand filling department we will have to increase the labour.

Dr. Matthai.—Can you tell me approximately how much increase that would mean in the labour that you employ.

Mr. Bawaney.—An increase of about 100 girls per day and 2 to 3 per cent. in the other labour.

Dr. Matthai.—So that it would really mean a very small addition to your present labour?

Mr. Bawaney.—That is so.

Dr. Matthai.—Are you familiar with the match industry in Japan?

Mr. Bawaney.—I went there in 1914 and am acquainted with the conditions which then existed.

Dr. Matthai.—In 1914 when you were there, most of the work was done by women in the factories there?

Mr. Bawaney.—Yes.

Dr. Matthai.—You employ more men than women here, don't you?

Mr. Bawaney.—Yes we can only have the lighter work done by women here.

President.—If you did everything by machinery how many men would you require?

Mr. Bawaney.—We can make a reduction of 500 men.

President.—But when you say you employ 1,500 men and you pay them by the piece, that does not really represent 1,500 at all because some of them may work two hours a day or less.

Mr. Bawaney.—Those who work on the machines have to attend 10 hours a day but those who do hand filling work can go at any time.

President.—How many are these?

Mr. Bawaney.—500 women.

President.—Do you pay them all by the piece?

Mr. Bawaney.—Yes.

President.—In all the departments?

Mr. Bawaney.—In Labelling Department by the basketful. If they label so many basketful of packets we pay them so much. We have got an approximate idea of how many boxes of full size and $\frac{3}{4}$ th size or half size a basket will contain and we pay accordingly.

Mr. Mathias.—You say you employ no child labour; is it because you find it unremunerative or what?

Mr. Bawaney.—We do not like child labour so long as we can get female workers because we have not got proper arrangements for accommodating them and because we have no work which we can leave to the children. The women are more efficient, and they can attend to this kind of work better.

President.—From what you say I take it that two-thirds of the work is done by machinery and one-third by hand?

Mr. Bawaney.—That is correct.

President.—And for this one-third you do not use machinery because you find manual labour cheaper than machinery?

Mr. Bawaney.—We find work done by women labour more satisfactory. Hand filling is better than filling by machinery.

President.—In what way is it better?

Mr. Bawaney.—If the dipping had been done on the simplex automatic machine then heads would be uniform and the sticks also would be uniform and then the automatic box filling machine would work properly. But our dipping is done by hand so the heads are not uniform so that if the work is done by machine the heads will sometimes stick together or the sticks will be broken.

President.—But you have automatic dipping machines too?

Mr. Bawaney.—Yes. When we dip matches in the simplex automatic machine we also use the automatic filling machine.

President.—You want to get rid of the hand filling machines and get automatic machines, don't you?

Mr. Bawaney.—We are going to try the simplex machines for one year and if we find it better then we will do away with the hand filling machines. We have not tried it long enough to decide what process to adopt.

President.—Do you mean to say that in Europe a lot of hand-filling is done?

Mr. Bawaney.—I heard from Mr. Littorin that hand filling is done in Sweden and that there they have been doing it from generation to generation and are so expert that they can do as many as 50 gross a day.

President.—How much do your workmen do?

Mr. Bawaney.—7 to 10 gross, but here labour is cheaper than in Sweden.

President.—It does not matter to you at all because if she only does 7 gross you pay her only for 7 gross?

Mr. Bawaney.—If they all become experts they can do more filling work, and rates would be reduced. Here we are paying now on the basis that they might get a rupee a day.

President.—That may be one of the reasons why they are not putting in as much work as they would otherwise do.

Mr. Bawaney.—I do not think that is the reason because they have really become more expert now. Formerly their average was 5 gross, now-a-days some can put in as much as 10 gross.

President.—How do you work out these figures of Re. 1.4-0 and Re. 1. How much do you pay per gross?

Mr. Bawaney.—We pay 12 annas per tin of 8 gross, that is an anna and a half per gross.

President.—That is for filling?

Mr. Bawaney.—Yes. When they do about 10 gross they earn about a rupee.

President.—How does the man earn Re. 1-4-0?

Mr. Bawaney.—We have drawn up an average of all classes of male labour, that makes Re. 1-4-0 a day.

President.—Then their wages are not apparently higher than in India?

Mr. Bawaney.—I have heard that in India the minimum is 8 to 9 annas. I think Tatas are paying that.

President.—That is purely cooly labour, not factory labour. Your wages do not appear to be very much higher than the corresponding wages in India?

Mr. Bawaney.—Mr. Sen has also calculated on the same basis.

President.—He may have done so, but in our enquiry we have not come across such low wages.

Mr. Bawaney.—Mr. Troup also did the same.

President.—Mr. Troup might have been right in 1909-1910. I don't think we have come across such low wages for factory labour as that.

Welfare.

Now as regards the welfare of labour, you don't have any doctor or anybody in attendance in the factory during the day.

Mr. Bawaney.—We have one doctor there.

President.—Does he move about the works during the day to see if there is any accident?

Mr. Bawaney.—He is always in attendance there. If there is any accident, the case is attended to immediately by the doctor.

President.—Is he a qualified medical practitioner?

Mr. Bawaney.—I don't think he has any medical degree, but he has worked as hospital assistant.

Mr. Mathias.—That is as a compounder.

Mr. Bawaney.—Yes.

Mr. Mathias.—I understood you to say that your medical officer had no medical qualifications.

Mr. Bawaney.—I don't know.

Mr. Mathias.—If he has no qualification he cannot be a sub-assistant surgeon.

President.—What is his pay?

Mr. Bawaney.—Rs. 75. In case of any serious accident, we send the man to the hospital.

President.—Are accidents frequent?

Mr. Bawaney.—No.

President.—What sort of accidents do you have?

Mr. Bawaney.—Sometimes the hand or face gets burnt.

President.—Have you had any fatal accidents in your works?

Mr. Bawaney.—No. There was only one case and that was a man who died of electric shock. That was the time when he was not on duty. He was feeling hot and wanted to have a fan. That was the only accident. But most of the work in the factory is light.

President.—In the result do you consider that your labour is fairly well trained or do you expect to train it much better?

Mr. Bawaney.—We don't think our labourers are quite all right. We expect to get some better improvement.

President.—Do you have much absenteeism?

Mr. Bawaney.—Not among the salaried employees,

Mr. Mathias.—Is the labour resident or do you have constant changes?

Mr. Bawaney.—Most of them are practically residents of Burma. The Indians have practically settled down and the Burman labourers come from nearly 8 villages round about.

Mr. Mathias.—Is the supply of labour pretty constant?

Mr. Bawaney.—Yes.

Power.

President.—How is your machinery run?

Mr. Bawaney.—It is run by electricity.

President.—All the machines are worked by electricity?

Mr. Bawaney.—Yes, almost all.

President.—You obtain your power from the Rangoon Electric Tramway Company.

Mr. Bawaney.—Yes.

President.—You have said that the rate is '8 of an anna per unit. Is that a flat rate or does it depend on the amount of electricity you take?

Mr. Bawaney.—Formerly it was on a sliding scale. Now it is a flat rate.

Dr. Matthai.—That is to say if you increase your output considerably and expend more electrical energy you are not likely to get a reduction in rate?

Mr. Bawaney.—Not now. Formerly we got a reduction.

Mr. Mathias.—Is the flat rate applicable for other factories as well as yours?

Mr. Bawaney.—I don't know of any other factory using the current from the Rangoon Electric Tramway Company.

President.—What is your present total consumption of electricity in a year?

Mr. Bawaney.—Besides the payment for current, we have to pay for the motor at the rate of Rs. 5 per horse power. Calculating the two, it comes to anna 1'6.

President.—You have got to pay so much per horse power.

Mr. Bawaney.—So much per horse power for the motors employed, plus '8 per unit for the consumption of electricity.

Dr. Matthai.—As. 1'6 per unit.

Mr. Bawaney.—Yes. For 100 gross it comes to Rs. 2-12-0.

Dr. Matthai.—The figure that you have given here includes both the flat rate and the special rate charged for your motors.

Mr. Bawaney.—Yes.

Dr. Matthai.—What I want to get at is this. Taking your last year's output you have apparently consumed 30,000 units of electricity. When you attain your full capacity, you will consume twice as much or at any rate considerably more. Have you made any enquiries with the electric supply company here as to possible reductions that they might make on rate if you use more current?

Mr. Bawaney.—We have not made any enquiries, but they have made a recent reduction from ... anna a unit to '8 anna a unit.

Dr. Matthai.—When you started your operations, you paid one anna a unit.

Mr. Bawaney.—It was even more than one anna.

Dr. Matthai.—What was it?

Mr. Bawaney.—It was on a sliding scale.

President.—Did they charge also per horse power then?

Mr. Bawaney.—Yes.

President.—What was the idea of charging per horse power? Are they your motors or theirs?

Mr. Bawaney.—Our motors. The idea is this. When we tell them that we are going to employ motors of so many horse power they have to make all the arrangements and keep the energy ready at their station to supply so many horse power whether we use it or not. So they charge so much per horse power and afterwards so much per unit consumed. If we begin working all our machines and they have not got their energy, we will have to stop.

Mr. Mathias.—It is calculated to cover out of pocket expenses when you are not working.

Mr. Bawaney.—Yes.

President.—I take it that you are getting 5,000 gross per day only when all your machines are working.

Mr. Bawaney.—Yes.

President.—So that your getting 6,000 gross per day would not necessarily mean any increase in your charges. It will simply mean getting more outturn.

Mr. Bawaney.—Possibly.

Dr. Matthai.—You can get your increased output by working your machinery at the same pace.

Mr. Bawaney.—Even if the output be increased, the increase in expenses would not be in the same proportion.

President.—At present your output is less because there is so much wastage. In the wastage also the same amount of power is consumed, is it not? Why should your charges for power increase at all?

Mr. Bawaney.—All the increase would not be the increase out of the savings in the wastage of the material, but what sometimes happens is that machines have to be stopped on account of the inefficiency of the girl or man attending to the machine and when they become more efficient, these machines would be working whole time and so there would be more energy consumed. The saving in power would only be in proportion to the less wastage that we have on account of the better efficiency of our workmen.

President.—You have already attained 5,000 gross. You want to get up to 6,000 gross.

Mr. Bawaney.—Yes.

President.—That is an increase of 20 per cent.

Mr. Bawaney.—Yes.

President.—Your wastage is now 18 per cent. You want to get down to 5 per cent. 13 per cent. out of the 20 per cent. will come out of the wastage.

Mr. Bawaney.—12 per cent. would only be the saving out of the wastage and the other 8 per cent. would come out of the consumption of more energy.

President.—Did you adopt electricity as motive power after examining the cost or simply adopted it because you found it more convenient? Did you try to find out whether there was any other method by which you could get the same result?

Mr. Bawaney.—We went into the figures and we found that electricity would cost a little more in money than any other form of power. But we found that it would be more convenient and we didn't consider that the extra cost was not justified on account of the better convenience.

Dr. Matthai.—The cost of power is a very small part of the cost of making matches.

Mr. Bawaney.—That is also true.

Fuel.

President.—As regards fuel, you require fuel chiefly for creating steam.

Mr. Bawaney.—We require steam for heating the drying machines,

President.—And also to boil the wood,

Mr. Bawaney.—Yes. We do not require all our wood to be boiled, but we have to boil certain kinds especially those which have got juice.

President.—That is all that you require.

Mr. Bawaney.—Yes.

President.—That I understand you find from your waste wood.

Mr. Bawaney.—Yes, at present.

Dr. Matthai.—Did you ever have to get wood fuel from outside?

Mr. Bawaney.—Up to the end of October, 1926, we were using paddy husks also.

Dr. Matthai.—When you get wood fuel, you never get it in the form of saw dust.

Mr. Bawaney.—No.

Dr. Matthai.—Have you any information that if anybody wanted saw dust for fuel in Rangoon, what would be the cost?

Mr. Bawaney.—We made enquiries about that but I am not quite certain just now. I think that it costs Rs. 8 per 100 bags.

Dr. Matthai.—That is, if you are situated near a saw mill or anywhere in Rangoon?

Mr. Bawaney.—If we are situated near a saw mill, it would be more economical to use saw dust. We require twice the quantity of paddy husk.

Dr. Matthai.—Then, it would be an advantage if a match factory in Rangoon were near a saw mill.

Mr. Bawaney.—In Rangoon, the cost would be about the same.

Mr. Mathias.—After you have utilised your waste wood for making steam and so on, have you any scrap left over?

Mr. Bawaney.—For the last two or three months, we have some surplus left but we think that it would all be used up in the rainy season.

Mr. Mathias.—Do you sell it?

Mr. Bawaney.—We don't.

President.—How much burning fuel do you get out of waste?

Mr. Bawaney.—We have not calculated that.

President.—We cannot in that case calculate at all what your fuel costs.

Mr. Bawaney.—If we really require wood for fuel, we would not use this wood. As we are getting this for nothing, we are using it as fuel. It has very little heating power. For fuel we have other varieties.

President.—Including your electric power the cost per 100 gross of boxes comes to about nearly two annas. What is your total electric bill?

Mr. Bawaney.—Rs. 3,000 to Rs. 3,200 a month.

Continued on Thursday the 24th March, 1927.

Market.

President.—You have given your estimate of the extent of the market as 14 million gross boxes.

Mr. Bawaney.—Yes.

President.—I suppose that you have taken it from the import figures.

Mr. Bawaney.—Yes.

President.—How have you calculated the production of matches in India? Nearly 8 million gross boxes are imported. Then, it is claimed that Bombay manufactures about 4 million gross and you manufacture about a million gross, the total being 13 million gross boxes. There are quite a large number of factories in the country, so that it must be more than 14 millions.

Mr. Mathias.—Before the specific duty was raised from twelve annas to Rs. 1-8-0, the total imports were as high as 18 million gross of boxes.

Dr. Matthai.—In 1915-16 the figure was 18 millions.

President.—That may perhaps partly be explained by the fact that matches were sent to the Expeditionary Forces. Before the war, it was 15 millions. Burma alone is manufacturing at present about 2 million gross, including yourself, the Swedish firm and the other two small factories. Thus, Bombay and Burma together with the imports account for 14 millions. There is the rest of India.

Mr. Bawaney.—The consumption may be more, but we have no reliable figures, other than the import figures.

President.—I am trying to find out whether any real attempt has been made to estimate the extent of the market.

Mr. Bawaney.—We have not gone deeply into the matter.

President.—Do you make any special attempt to popularise your matches or how do you expect to increase your market?

Mr. Bawaney.—We have appointed agents everywhere and there are canvassers under them.

President.—Have you got agents who are selling your matches only and not any other matches?

Mr. Bawaney.—Our agents would not deal with matches of other manufacturers.

President.—The foreign manufacturer may send out his man with the best matches who may say "look at the Indian matches, they are bad and I will sell you the matches I have brought at the same price." Do you do anything of that sort?

Mr. Bawaney.—We do our best to popularise our matches.

President.—Do you have to sell your matches on commission?

Mr. Bawaney.—Yes. We have also many branches.

President.—That is to say, you have paid agents.

Mr. Bawaney.—We have got our own offices with our own staff.

Dr. Matthai.—Do you mean that you have paid agents for all the businesses that you are doing?

Mr. Bawaney.—We have only for matches.

President.—In how many places have you got agents?

Mr. Bawaney.—In nine places, viz., Calcutta, Cochin, Madras, Calicut, Mandalay, Thazi, Bassein, Prome and Henzada.

President.—You have your own agents in all those places to look after the match business?

Mr. Bawaney.—Yes.

President.—When you sell on commission, how much commission do you have to allow?

Mr. Bawaney.—We have not got a flat rate of commission.

President.—On an average how much would you have to pay?

Mr. Bawaney.—About Rs. 4-8-0 per 50 gross.

President.—That is about 1½ annas per gross.

Mr. Bawaney.—Yes.

Mr. Mathias.—Do you sell your matches in Calcutta?

Mr. Bawaney.—We do.

Mr. Mathias.—Are they on sale at Calcutta.

Mr. Bawaney.—We despatch about 200 cases a month to Calcutta.

Dr. Matthai.—Have you any idea whether they are sold in Calcutta or in the moffusil?

Mr. Bawaney.—At present it is only in Calcutta and not in the surrounding districts.

Dr. Matthai.—Out in India, you generally deal at the ports.

Mr. Bawaney.—The fact is that we have branches in very many places. The people at the ports send our matches to the surrounding locality.

Dr. Matthai.—The agents are stationed at the ports.

Mr. Bawaney.—Yes. They send out canvassers to tour round the neighbouring districts by rail.

Mr. Mathias.—Is there any difficulty in selling your matches?

Mr. Bawaney.—For the last six months we have been able to sell all our production.

President.—Though the output has increased a lot?

Mr. Bawaney.—Yes.

Mr. Mathias.—You have got your own sales organisation.

Mr. Bawaney.—Yes.

President.—What I wish to know is what percentage you sell in Burma and what you export?

Mr. Bawaney.—If we take the average for the last six months, 50 per cent. is sold in Burma and 50 per cent. is exported to India.

President.—Do you get a better price in India than in Burma?

Mr. Bawaney.—We realise as a matter of fact a little less in India because our charges are higher there.

President.—What is the difference in the nett prices you get in India and Burma? Do you export only half sizes?

Mr. Bawaney.—We export to India both half and full. For the half sizes we realize Rs. 1-3-0 per gross. For the full size the price we have given is an average, that is Rs. 1-8-0.

President.—What do you get in Burma?

Mr. Bawaney.—Rs. 1-9-0 in Burma and Rs. 1-7-0 in India.

President.—Would that pay for your freight and landing charges?

Mr. Bawaney.—Yes.

President.—What about Swedish matches. Would they sell at about the same price?

Mr. Bawaney.—What they manufacture here from indigenous wood they sell at Rs. 1-4-0 per gross while we sell at Rs. 1-9-0. What they manufacture here are not quite as good as our matches.

Dr. Matthai.—I have heard it suggested that the reason why you charge a lower price in India is that you experience more competition in India from the Swedish Match Company?

Mr. Bawaney.—That is so. Within the last six months they have reduced their price by about 4 annas per gross, by reducing their prices every month by one anna, one anna and a half and so on.

President.—Have they done the same here?

Mr. Bawaney.—They have done the same but their quality not being good they cannot stop our sale here. People are more satisfied with their imported matches than their matches made from indigenous wood.

President.—They also import wood, do they not?

Mr. Bawaney.—Yes, and the matches manufactured from imported wood they are selling at Rs. 1-8-0.

President.—I take it all the imported Swedish matches are imported by the Kemmendine Match Company, Limited?

Mr. Bawaney.—Yes. It is a subsidiary company of the Swedish Trust.

President.—Therefore, the only people who can give us the price of Swedish matches are these people?

Mr. Bawaney.—Yes.

Dr. Matthai.—Do you think that the only way by which consumption of matches can increase is by the increase of population and of the habit of smoking?

Mr. Bawaney.—I don't think that that is the only way.

Dr. Matthai.—What is your experience? Supposing you bring down the prices still further, is the general consumption of matches likely to increase?

Mr. Bawaney.—I don't think so, because a person who uses one box of matches and pays two pice for it perhaps needs one box to serve his purpose and he won't strike two matches because he gets it cheaper.

Dr. Matthai.—Supposing we increased the duty and put up prices will that reduce consumption?

Mr. Bawaney.—Yes, but to a very small extent, because if it becomes too dear the poorer people will economise a little more.

President.—The prices are not governed by the foreign price *plus* the duty, are they?

Mr. Bawaney.—These prices are governed by the price of foreign matches because if they were not so, foreigners would not up to now, be able to supply 50 per cent. of India's requirements. Even now they are supplying 50 per cent. of India's requirements.

President.—50 per cent. is represented by the imports. In addition to that they are manufacturing about 25 per cent. in the country, so that it is really 75 per cent. that they are supplying?

Mr. Bawaney.—That is so.

Mr. Mathias.—Is it not correct to say that the price of imported matches is governed by the price of local matches? You told us yesterday that the money value of the prejudice against Indian matches was about 12 annas to Re. 1 a gross and therefore if your price is Rs. 1-8-0 the foreign price would be Rs. 2-4-0 to Rs. 2-8-0.

Mr. Bawaney.—What I meant to say was not that the money value of the prejudice was 12 annas a gross but that on account of the prejudice these people are at present able to get so much more, but that those who are prejudiced in favour of foreign matches would still buy foreign matches even if they charged Rs. 2 extra till such time as they were convinced that the Indian matches were quite as good.

President.—You cannot explain it away in that way completely. At present the demand is about 17 to 18 million gross. India is not manufacturing more than 10 million gross, and, therefore, 7 million matches have got to come from foreign countries. Apart from the prejudice there is a market which has to be supplied.

Mr. Bawaney.—It is not because India cannot manufacture more but because of the prejudice that there is not sufficient demand for Indian matches. There are Indian factories which are quite capable of producing much more and are not working to capacity, while there are some who have large stocks left on hand. If we had sufficient demand we could manufacture double the amount of our present production.

President.—That applies to the inferior quality of matches, but there is a margin at present of 12 annas to a rupee a gross for the better class of matches, and if better class of matches are entering the country in competition with indigenous matches, there must be market for them.

Mr. Bawaney.—That is true. But even if India begins to produce better matches the Trust is not going to let go its hold on 75 per cent. of the market and they will lower their prices. So far as I am aware, they are not dependent on what prices they realize here. The trust has its ramifications all over the world and they have in past years made and are making such big profits on their turnover that even if they suffer a loss in their business in India, it would not matter to them.

President.—Can you let me have the freights, insurance and landing charges to the different ports that you have mentioned.

Dr. Matthai.—Is Berhampore a port?

Mr. Bawaney.—No. Gopalpore is the port but we ship our goods to Berhampore.

Dr. Matthai.—What about Cuddalore?

Mr. Bawaney.—The Scindia Steam Navigation Company's steamer goes to Cuddalore at times.

President.—I want the freights to the places mentioned in your answer to Question 46, namely:—Tavoy, Mergui, Akyab, Chittagong, Calcutta, Gopalpore, Coconada, Madras, Cuddalore, Tuticorin, Cochin, Calicut.

Mr. Bawaney.—We shall send you a statement later.*

Dr. Matthai.—Does your agent at Cuddalore complain of smuggling from the Pondicherry frontier?

Mr. Bawaney.—No.

President.—Do you get regular freights to these different ports in India?

Mr. Bawaney.—To Coconada, Madras, Calcutta, Tavoy, Mergui and Akyab we get regular freight, but as regards the other ports they are not so regular and we have to keep one month's supply at the other ports.

President.—What is the longest time you have to stock your matches?

Mr. Bawaney.—At present not long; we generally have to keep stock for about one month because the quality has improved.

Mr. Muthias.—How many months credit do you allow?

Mr. Bawaney.—On an average 4½ months.

President.—When you say that you are exporting 50 per cent. do you mean to India alone?

Mr. Bawaney.—India only.

President.—How much do you sell outside Rangoon of the 50 per cent. you sell in Burma?

Mr. Bawaney.—Out of the 50 per cent. sold in Burma, about 5 per cent. would be in Rangoon and 45 per cent. outside Rangoon.

President.—As much as that?

* Supplementary Statement No. 9.

Mr. Bawaney.—Yes.

President.—Do you send these matches outside Rangoon chiefly by rail?

Mr. Bawaney.—By rail and river boats in the delta.

President.—You would not send them to Prome by rail?

Mr. Bawaney.—Yes, we would.

Dr. Matthai.—Of the 50 per cent. that you send to India how much goes to Bengal ports and how much to Madras ports?

Mr. Bawaney.—42½ per cent. on the Madras side and 7½ per cent. to Bengal.

Dr. Matthai.—How do you account for this fact that the bulk of your sales is done in Madras.

Mr. Bawaney.—In Calcutta the Swedish Trust has got its own factory and there is keen competition. If they were to send their matches to Madras, they would have to pay railway freight. We can get a better price in Madras than in Calcutta.

President.—Have not the Swedish Match Company a factory at Madras?

Mr. Bawaney.—We have heard that they are going to start, but it is not ready yet.

Dr. Matthai.—In the other lines of business that you do, have you more business connections with Madras than with any other province?

Mr. Bawaney.—We have not got much business connection regarding our other business. Mostly our other business is in Calcutta. We are dealing in hessian and gunnies.

President.—In answer to Question 48 (b) you say "As far as Burma is concerned we have reasons to suppose that there is a certain amount of illicit importation of matches into the country over the Chinese frontiers. Such illicit imported matches are being sold in almost all places in Shan States." Are you speaking from personal knowledge or this is what you have heard?

Mr. Bawaney.—From the reports of our agents and canvassers at these places.

President.—How do you know that they are smuggled?

Mr. Bawaney.—Because the brand sold there are not known to have been imported through any port in Burma nor are they manufactured in Burma and from looking at the matches one can say that they are of Chinese manufacture.

President.—It cannot be on a very large scale.

Mr. Bawaney.—They can bring as big quantities as they want by mules because generally China takes its food it requires from the Shan States and so the caravans have to come to take away the goods. When the mules from China are coming empty, they can accept any freight. Our last information is that 16,000 gross was imported at one time.

President.—Anyhow the Collector of Customs is coming to give evidence and we shall ask him about that.

Competition

Now as regards competition you say that competition from Sweden is keenest and Japan also competes. As far as we can see at present the competition from Sweden is not very great so far as you are concerned.

Mr. Bawaney.—We can only say this much that when Sweden sells 50 per cent. of our requirements, the competition must be very keen.

President.—Unfortunately we have not got figures to show from what countries these matches are being imported into each province. The only thing that the figures show now is that Japanese matches are gradually being pushed out by the Swedish matches throughout India. That is quite clear from the figures, but it is not quite clear what is happening in Burma.

Mr. Bawaney.—The same state of affairs prevails in Burma too.

President.—I should like to point out that so far as the Swedish imports are concerned in the last three or four years there has not been a very marked variation, but as regards Japan the imports are steadily decreasing. What these figures suggest is rather this that locally made matches either by Swedes or by you have pushed out Japanese matches. The imports from Sweden do not show such big variations. At present it is the Indian match which is really competing against Japanese matches either made by the Swedish Company or by the Indian Company.

Mr. Bawaney.—As the Indian matches continue to improve, they are getting better sales here, but on account of these other imports, Indian matches are not able to command as much sale as they would otherwise be able to command.

President.—What these figures seem to show is that Japanese matches amounted to 15 millions in 1917-18 and then they began to decline, though there was some slight variation the other way. From that they have come down to about a million.

Mr. Bawaney.—One interpretation of these figures would be that India has been able to compete successfully with Japan and has not been able to compete successfully with Sweden.

President.—That is what I am trying to point out just now. Your competition has practically killed the Japanese competition. Though we have no definite evidence, if the Swedish Trust is operating in Japan, then it may be that they are not exporting any matches from Japan at all and they are simply manufacturing more matches locally to replace their own Japanese matches in India. That is quite possible.

Mr. Bawaney.—This shows that Sweden is still competing in the Indian market and is able to hold its own.

President.—Of course it may also show that they have come to some understanding with Japan.

Mr. Bawaney.—We are getting regular reports from Japan. I will give you some particulars about this. They have not got any special arrangements with the Japanese manufacturers so far as we have been able to ascertain.

President.—We will have to go into that question a little more fully later on. What I wish to know is that in answer to Question 51 (1) you have not given me the figures for 1925-26 for the foreign matches nor for 1924-25. I want you to give me separate figures for Swedish and Japanese matches. We will get the figures from Swedish manufacturers as regards Swedish matches.

Mr. Bawaney.—We will give you figures for Japanese matches.

President.—I want to know only about Japan. You stopped importing them in 1923-24. Who are the principal importers of Japanese matches?

Mr. Bawaney.—Mitsui Bushan Kajsha. En Hing Hwat.

President.—Have they got their offices here?

Mr. Bawaney.—Yes.

Dr. Matthai.—What is your impression during these years for which you have given your prices? Are the Japanese prices lower than Swedish prices?

Mr. Bawaney.—I cannot say for certain.

Dr. Matthai.—Because I noticed from the trade returns a difference of annas 2 to annas 3 between Swedish and Japanese matches.

Mr. Bawaney.—Quite possible.

President.—There must be some mistake. This works out at Rs. 2-12-0 and if you deduct Rs. 1-8-0 from that, it comes to Rs. 1-4-0. That is the figure we get from the import figures, but you have given here Re. 1.

Mr. Mathias.—If you add to the cost of Rs. 50, the duty of Rs. 75 it comes to Rs. 135. There is a balance of Rs. 10 (Rs. 135 minus Rs. 125).

Mr. Bawaney.—That is for the seller.

President.—There is a substantial difference between these figures and the Customs figures. The Customs figures are very often not accurate. The duty is not *ad valorem* but specific. For that reason the Customs authorities need not enquire into the market price.

Mr. Bawaney.—They must have put down approximate prices. We were the biggest importers of Japanese matches here up to 1924. About 70 per cent. of Burma's requirements was met by us. We have worked out these figures.

Dr. Matthai.—The prices given in the Trade Returns might be for the average size.

Mr. Bawaney.—It might be so.

Mr. Mathias.—For the purpose of comparing the selling price with the fair selling price for the Indian matches, you will have to deduct the profit of Rs. 10 which is given to the wholesale merchant.

Mr. Bawaney.—Yes.

Mr. Mathias.—Rs. 125 would include the cost of production, overhead charges and manufacturer's profit.

Mr. Bawaney.—Yes.

Mr. Mathias.—The prices that you have given in answer to Question 51 (2), are they nett or gross?

Mr. Bawaney.—They are the prices at which we sell. They are gross prices.

Mr. Mathias.—These are the prices at which the manufacturer sells to the wholesaler?

Mr. Bawaney.—Yes.

President.—The man who imports also does not sell direct. He sells them to other people.

Mr. Bawaney.—Yes, to the petty traders. We sell to the wholesale merchants.

President.—These prices are wholesale prices.

Mr. Bawaney.—Yes.

President.—From Rs. 1-8-0, how much has to be deducted to arrive at the nett price?

Mr. Bawaney.—Two annas.

President.—You get about Rs. 1-6-0 at the factory.

Mr. Bawaney.—Yes.

Mr. Mathias.—After paying the duty, the foreign manufacturer would get Rs. 125 and not Rs. 135.

President.—When the foreign manufacturer sells at Rs. 2-8-0 you sell at Rs. 1-6-0. Even in competition with Japanese matches, you have to sell your matches two annas cheaper.

Mr. Bawaney.—Yes.

President.—Is that due to the prejudice?

Mr. Bawaney.—Yes.

President.—I don't understand why Japan should get nearly one rupee more than you do.

Mr. Bawaney.—Japan has got a good hold on the market. Their matches are well known. The consumers purchase matches with labels which they know well. We are trying to push our way. We have to reason with customers and tell them that our matches are really good and thus induce them to buy. We are gradually making headway.

President.—It is quite possible that your matches in the bazar do not sell really as cheaply as you are selling to your wholesaler.

Mr. Bawaney.—Our matches sell at the rate of one pice per box. If you buy only one Japanese match box, you will have to pay two pice because there

is no half pice current in Rangoon but if you buy two boxes, you have only to pay three pice. Swedish boxes also sell at the same price as Japanese.

President.—Per packet of 10 boxes, you get one anna less.

Mr. Bawaney.—Yes. It is the retailer that gets that.

President.—Are you sure that your retailer sells your matches at this price?

Mr. Bawaney.—Yes.

President.—How do you know?

Mr. Bawaney.—We had a peculiar case in the Court and they gave evidence to the effect that they were selling at the rate of $2\frac{1}{2}$ and $2\frac{1}{2}$ annas. When the enquiry was going on, they were asked about the Japanese matches and they gave these figures.

President.—But the case was between you and the Swedish Match Company?

Mr. Bawaney.—When the case was going on they gave evidence about Japanese matches.

Mr. Mathias.—Your retail price is Rs. 2-4-0 a gross?

Mr. Bawaney.—This is how it happens. We sell to the wholesaler, then it goes to the petty trader; he in his turn sells to the shopkeepers and very small shopkeepers and they have this price.

Dr. Matthai.—When you get down to the petty shopkeeper or the *biriwalla*, that is to say the last stage before you reach the consumer, there is practically no difference between your price and the Swedish; am I right?

Mr. Bawaney.—We sell in packets of 10 at annas 2-3 to annas 2-6 according to distance and the petty seller sells at 3 pice a box while the Swedish is sold at 2 pice a box or if a consumer buys two boxes he has to pay 9 pice.

Mr. Mathias.—That works out to Rs. 2-4-0 a gross and the other Rs. 3-2-0, so that when you really get down to the retailer there is still a difference between your price and the Swedish price.

Mr. Bawaney.—There is a difference of about 50 per cent. between the two.

President.—Let us take the *bidiwala*. He sells your packets of 10 for annas 2-6, that means you have got to get 144 pice or Rs. 2-4-0 for a gross.

Mr. Bawaney.—That is correct, and the Swedish sells at annas 3-6 per packet of 10 or Rs. 3-2-0 per gross.

President.—He gets 50 per cent. more, that is to say, you have got to pay the whole difference between the import price and your selling price, that is what it comes to.

Dr. Matthai.—Or in other words the prejudice against your matches, which is measured at somewhere between 12 annas and Re. 1, continues right up to the retail end?

Mr. Bawaney.—Yes.

Dr. Matthai.—With regard to this question of prejudice you say that this prejudice exists both in favour of Swedish matches, and of Japanese matches.

Mr. Bawaney.—Yes.

Dr. Matthai.—I take it, it is largely due to the fact that the big dealers in the country have been accustomed to selling these foreign matches and they have, therefore, a vested interest and try to push the sale of the foreign matches for all they are worth?

Mr. Bawaney.—Yes.

Dr. Matthai.—The principal sales organizations in this country are more interested in selling foreign matches and therefore this prejudice exists. What I want to put to you is this; your firm has also been engaged in importing matches for a long time and, therefore, you have a good sales organization at your disposal and you ought to be able to get over this prejudice more quickly than other local manufacturers?

Mr. Bawaney.—That is right. That is the reason why we have been able to make such headway.

President.—There must be some explanation for the difference between your price and the imported price of 14 annas. Perhaps the agent gets more commission?

Mr. Bawaney.—He gets Rs. 4-11-0 commission per case wholesale. For the Swedish matches he gets Rs. 4-11-0 for 50 gross that is annas 1-6 per gross and at the same time he gets the case which he can sell at Rs. 1-12-0 to Rs. 2.

President.—That is another half an anna, so that he gets 2 annas. How much do you give?

Mr. Bawaney.—We give commission about Rs. 4 but we do not give the case.

President.—Your price is not comparable with his in that case. You have got to deduct from the c.i.f. price the price of the packing case.

Mr. Bawaney.—Yes.

President.—They come to about half an anna cheaper. The point is that you are giving him the same commission as the other man except that he gets Rs. 2 extra for the packing case.

Mr. Bawaney.—Yes.

President.—So that the thing for you to do may be to give him some interest in selling your matches.

Mr. Bawaney.—They are making more profit by selling our matches. By selling our matches at Rs. 1-9-0 they make a profit of 10 annas whereas for Swedish matches they have to pay Rs. 2-10-0 and make a profit of 8 annas by selling at Rs. 3-2-0.

President.—But if that is so why should they not sell more of your matches?

Mr. Bawaney.—What we have been trying to show is that although we are trying our utmost to push our sales by giving better terms to the dealers—and it is cheaper for the consumer too—the consumers are prejudiced in favour of foreign matches and they are prepared to pay a little more just now.

Mr. Mathias.—Is it prejudice in favour of the label?

Mr. Bawaney.—Not only label. Even if the label be unknown to them but has merely got "made in Sweden" printed on it, they will buy that.

Mr. Mathias.—But 90 per cent. of the people cannot read?

Mr. Bawaney.—That is so, but the dealers themselves are prejudiced in favour of Swedish matches.

Mr. Mathias.—I take it that the more you reduce your prices the more advantage you give to the various retailers without giving any advantage to the consumers, because the consumer cannot really buy his matches at less than a quarter of an anna so any further reduction is likely to be of advantage to the retailer.

Mr. Bawaney.—That is so if the reduction is small, but if there is considerable reduction then the consumer will get three boxes for 2 pice or if the reduction is still more he will get 4 boxes for 2 pice.

Mr. Mathias.—But it has to be a very large reduction.

President.—I think the difficulty can be got over in this way; they will buy half a pice worth of *pan* and half a pice worth of matches and pay him quarter of an anna!

Mr. Bawaney.—That is quite true, but so long as the present conditions prevail if we sell it at a lower price we shall have to close down our factory.

Dr. Matthai.—In answer to Question 51 you say "Import from Europe at that time was on a very small scale." Do you mean only to Burma?

Mr. Bawaney.—Yes.

President.—You give three prices in answer to Question 53. When the duty was 5 per cent, the price was 14 annas per gross; when it was 12 annas per gross the price went up to Rs. 1-10-0, that is it went up precisely by 12 annas; and in the next period with the duty at Rs. 1-8-0 per gross, or when the duty went up by another 12 annas the price rose by one rupee. You can't say that the duty has not been transferred to the consumer?

Mr. Bawaney.—It is only those people who are prejudiced in favour of foreign matches have to pay the duty, but others get the matches cheaper. If the duty had not been imposed they would not have been able to get matches at the rate of one pice per box. All would have to pay half an anna per box.

Mr. Mathias.—Why?

Mr. Bawaney.—All the markets would be in the hands of the foreign manufacturers and they would command any price.

Mr. Mathias.—I don't see that that follows exactly. When the duty was 5 per cent, matches were selling at Annas 14 per gross.

President.—What we really want to know is what is the price in Japan itself and in Sweden for these matches.

Mr. Bawaney.—I don't know.

President.—Of course we can get it from the Swedish match factory or independently. There would be no difficulty about that. Until we know that matches are being sold in this country cheaper than they are sold in Sweden or Japan this point is not established.

Mr. Bawaney.—I am not in a position to give the rates prevailing in Sweden and Japan.

Dr. Matthai.—These prices that you give here in answer to Question 53, are these current prices?

Mr. Bawaney.—Yes.

President.—Are these wholesale prices?

Mr. Bawaney.—Yes.

President.—Are these Japanese?

Mr. Bawaney.—They are Swedish.

President.—But have you not got any figures for Japanese matches?

Mr. Bawaney.—No.

President.—Do you know whether there is any Japanese firm manufacturing matches in India?

Mr. Bawaney.—I have heard that there is one factory somewhere at Calcutta in which Mitsui Bushan Kaisha and some other Japanese firm are interested. I don't know of any other factory.

President.—So that we cannot really compare the prices of matches manufactured by Japanese firms in India as compared to yours.

Mr. Bawaney.—No.

President.—As regards the Swedes, you have already told us that you get a better price than they.

Mr. Bawaney.—Yes.

President.—In the bazaar for instance for how much would they be sold?

Mr. Bawaney.—Their rate was Rs. 11 for 8½ gross. I hear two or three days ago they have reduced it to Rs. 10. Their matches are manufactured in Burma out of Burma wood.

Mr. Mathias.—Your price is Rs. 1-8-0.

Mr. Bawaney.—Yes.

President.—Yesterday we heard that these matches made out of Japanese aspen wood were selling at about Re. 1-9-0.

Mr. Bawaney.—In the whole Mandalay District there are still lying tins which have been sold at Rs 11 to my customers.

President.—That of course may be as regards the old stock.

Mr. Bawaney.—I don't know. It is Burma made matches.

Dr. Matthai.—In Mandalay? How long ago was it?

Mr. Bawaney.—Since three or four months ago at Rs. 11 a tin of 8½ gross.

President.—I was trying to point out to you that the matches made out of Japanese wood apparently fetch a higher price than your matches made out of indigenous wood.

Mr. Bawaney.—No.

President.—They don't fetch any higher price than yours?

Mr. Bawaney.—Not at all. Six months before they were getting Re. 1 more per tin. Now I find the prices are the same. Now if the matches are made out of Japanese aspen wood here, they don't command a better price than those made by us out of indigenous wood.

Dr. Matthai.—It is not worth while at all to make matches out of Japanese wood.

Mr. Bawaney.—No.

President.—The real thing is to get the Japanese label to get a higher price, I suppose?

Mr. Bawaney.—If we get a Japanese label we can get the same price as they would get.

President.—If you get the Swedish label you would get the same price as they would get.

Mr. Bawaney.—Yes.

President.—You have not understood the meaning of this question 54. What we wanted you to show is to what extent you were at a disadvantage. Would it be correct to say that your machinery erected in India would cost about 20 per cent. or 25 or 30 per cent. more than the same machinery erected in Europe including the duty?

Mr. Bawaney.—About 25 per cent. more.

President.—In the case of stores, it would be the same thing more or less.

Mr. Bawaney.—Yes.

President.—Except that you would pay 15 per cent. duty.

Mr. Bawaney.—Yes.

President.—Then as regards freight on finished goods you would not have any great disadvantage as compared to the foreign manufacturer.

Mr. Bawaney.—As regards the local market, we are better situated regarding freight, but if we have to send matches from here to Madras or other ports, sometimes we have to pay more freight than the foreigner has to pay. From Kobe (Japan) to Rangoon the freight is Rs. 11-9-0 and from Rangoon to Madras we have to pay Rs. 14. When the foreign manufacturer sends goods to any port in India except Rangoon, he has to pay less freight than we have to pay to such ports.

President.—Take the Swedes themselves. They manufacture matches here in the country. They have to pay more for their plant and machinery, stores and everything.

Mr. Bawaney.—Yes.

President.—So far as those items go you are no worse off than the Swedish manufacturer.

Mr. Bawaney.—No.

President.—As regards the foreign manufacturer you would be at a disadvantage in respect of machinery and stores.

Mr. Bawaney.—Yes.

President.—But as regards the other items you are not at such a very great disadvantage.

Mr. Bawaney.—As regards the freight we are at a disadvantage and when compared to the Swedish Trust we are very much at a disadvantage because they manufacture their own paper, chemicals, etc. Whatever they require in connection with the Match Industry, they manufacture themselves.

Dr. Matthai.—What about the supply of wood? Most of their factories get wood from elsewhere. In that respect you will be in a position of advantage.

Mr. Bawaney.—Provided we use indigenous wood, we are better situated in that respect.

President.—As regards Japanese prices, would you be able to give us f.o.b. prices up to 1923-24?

Mr. Bawaney.—We always purchased at c.i.f. prices.

Mr. Mathias.—You say in answer to Question 54 (g) that you have to keep other materials to last for at least six months in stock.

Mr. Bawaney.—We cannot get in India these chemicals at a moment's notice. All factories, whether financed by foreigners or by Indians, have to keep a certain amount of stock.

Mr. Mathias.—For how long?

Mr. Bawaney.—I do not know for what length of time they keep stock but we keep for six months because we cannot get these chemicals in India. Transport also takes time. Sometimes, it takes two months for the chemicals to arrive after the date of shipment.

Continued on Friday, 25th March 1927.

Plant.

President.—As regards equipment, you say that in your opinion 700 gross of boxes per day would be the smallest unit of production which can be operated economically. How do you work out 700 gross of boxes? Will you have to work everything by machinery or partly by machinery and partly by manual labour?

Mr. Bawaney.—By machinery only.

Dr. Matthai.—I take it that you took this figure of 700 gross from Mr. Troup's book.

Mr. Bawaney.—We had discussion on this matter with the expert often and even with the Roller's representative. Their opinion is that the minimum production should be 700 gross per day to do it economically and that it should be done by machinery. We will have to have at least one peeling machine and one peeling machine would turn out 700 gross and if our production is less, that machine would be lying idle for part of the time.

Dr. Matthai.—One of the reasons why Mr. Troup suggested 700 gross was that as the then latest machine known as the "continuous machine" was capable of producing 350 gross, it would be an advantage to have an outturn of some multiple of 350.

Mr. Bawaney.—Even if you did it by automatic machine, one machine would do 700 gross a day.

President.—May I take it that your machinery consists of multiples of 10 machines or 5 machines, each set producing 700 gross of boxes.

Mr. Bawaney.—Yes, but we have also some spare machines so that replacements can be made in case of any breakdown. About 10 to 15 per cent. we have got spare machinery.

President.—How many peeling machines have you got?

Mr. Bawaney.—We have 10 peeling machines. On the basis of 700 gross per machine, they would produce 7,000 gross but we are calculating on the basis of 6,000 gross only.

President.—May I take it that really speaking you have 10 units of manufacture?

Mr. Bawaney.—Yes.

Economical Production.

Dr. Matthai.—What you really mean by economical production is that under present conditions, that is to say so long as the price of your full size box per gross is Rs. 1-8-0, then a factory producing 700 gross a day would be able to make a fair profit.

Mr. Bawaney.—Yes, if the labour is efficient and if the production is by the latest machinery.

Dr. Matthai.—On a production of 700 gross a day, they would make a fair profit.

Mr. Bawaney.—Yes.

Mr. Mathias.—By fair profit do you mean 12 per cent. on your capital?

Mr. Bawaney.—Yes, about that.

Dr. Matthai.—Apparently, people who are not using machinery to the extent you do, viz., the Muslim Match Factory or the Rangoon Match Works, are able, in your opinion, to make a fair profit.

Mr. Bawaney.—Yes, on account of the cheap labour. In India at present it is cheaper to do most of the work by hand but manual labour has one disadvantage and that is that you cannot have a large production. Further, if the work is done by hand, the quality won't be uniform. Whereas if you do it by machinery, the quality will be uniform. In Calcutta there are some people who do everything by hand. Even the cutting they do by hand. They are able to sell cheaper than others and still make a fair profit.

President.—If the work is done by hand, it will be very difficult to get a uniform quality.

Mr. Bawaney.—That is so.

Mr. Mathias.—You said that the output, if done by hand, would be limited. What would be the limit?

Mr. Bawaney.—Now in our factory by employing 1,500 hands we can turn out 6,000 gross but if all the work were to be done by hand—I have not gone into the figures carefully—I think that a very much larger number of hands would be required.

Mr. Mathias.—Then the production would be limited by the amount of labour.

Mr. Bawaney.—Yes.

President.—Even if you have twice the number of men, it is not a very large number in a big population.

Mr. Bawaney.—That is so.

President.—Of course there is some reason in that. Already there is a lot of prejudice against Indian matches and if more matches were produced in the country by hand and if the quality was not maintained, it may be still more difficult for the Indian industry to establish itself. That is one of the drawbacks of manual labour.

Mr. Bawaney.—If the workmen were properly trained they would be able to maintain a uniform quality after a time. The Japanese manufacturers are producing matches mostly by manual labour. The quality is not bad, nor does it vary very much. If the labourers are properly trained, there will not be so much difficulty. In the beginning, the Japanese manufacturers also must have experienced difficulties.

Dr. Matthai.—Partly it is a question of your labour being sufficiently trained and partly the question of uniform quality will be determined by the kind of supervision that you can provide.

Mr. Bawaney.—Take for instance the work of pasting. If the workmen are not properly trained there would be too much of paste sometimes. If they had not much practice, they would not be able to paste the paper exactly parallel to the edges. In the case of inner containers, the same difficulty would be experienced. The corners may not stick properly. But if the labourers take up match making as their profession, if they have to depend for their livelihood on match making, they would train themselves up to proper efficiency in the matter. I am more encouraged to say this because in India though they found much difficulty in the beginning, they are now doing nearly all right.

Dr. Matthai.—Speaking as a large manufacturer of matches in India, do you think that your interests would suffer to any extent by the fact that there are large numbers of small factories in India producing matches of indifferent quality.

Mr. Bawaney.—No, I don't think so.

Dr. Matthai.—Supposing, for example, you are exporting a fairly considerable quantity of matches to India and if two or three smaller factories send matches of inferior quality and finish to the same markets, then people in the

Indian market will say "all these matches are coming from Burma and therefore you cannot depend on the quality of Burmese matches." What have you got to say to that?

Mr. Bawaney.—I don't think we would experience any difficulty unless the labels of the other manufacturers were confused with our labels. When their labels are quite distinct from ours we would not suffer as a result of the inferior quality of their matches. Swedish matches are recognized by the people by their labels so our labels are quite distinct and the consumers distinguish our matches by the labels.

President.—What I want to be sure about is this. You can make 700 gross boxes out of machinery.

Mr. Bawaney.—Yes, conveniently.

President.—So can you more or less by manual labour chiefly. For machinery you have simply to use the peeling and the chopping machines in that case that is all.

Mr. Bawaney.—Yes, it can be done.

President.—In the latter case so long as labour is cheap it is really a more economical unit than one worked by machinery.

Mr. Bawaney.—That is quite true. I have already stated that if you can get sufficient labour who will take it up as a profession, it would be cheaper to do the work by manual labour, so long as labour remains cheap.

President.—For a long time to come until labour is fully trained, the prices in the country will be governed by hand made matches practically because they will sell them cheaper than machine made matches?

Mr. Bawaney.—Yes. Then of course we too will be compelled to do by hand.

President.—Then the quality of the whole production of Indian matches will deteriorate until labour is properly trained?

Mr. Bawaney.—I have already told you that if the labour is trained and they can make uniform quality of matches then it will be cheaper to do by hand, as they are doing in Japan.

Mr. Mathias.—It would not pay you to keep all your machinery idle and employ manual labour?

Mr. Bawaney.—We will only have to discard the box making machinery because we will require the peeling and the chopping machines all the same. Manual labour can compete with machinery only in box making—outer and inner—and labelling, and these machines do not lock up much capital.

Mr. Mathias.—The only thing you will have to show is that you can eventually compete with the hand made matches.

Mr. Bawaney.—We do not require to compete with the hand made matches at all. We can discard our box machine in that case and employ manual labour.

Mr. Mathias.—You will also have to do the filling by hand?

Mr. Bawaney.—Machine filling will be cheaper than hand filling.

President.—Then what is the point in having merely the boxes made by hand? You can have everything done by machinery in that case?

Mr. Bawaney.—When it becomes cheaper to have boxes done by manual labour we can discard the box making machine.

Mr. Mathias.—Would not that also apply to your filling machine and the wrapping machine?

Mr. Bawaney.—Wrapping machine and the box making machine are the same. Box filling is cheaper by machine than by manual labour if you do it by the Simplex automatic machine.

Mr. Mathias.—What about box packeting and gross packeting?

Mr. Bawaney.—Box packeting is also cheaper by machinery than by hand gross. Packeting of course has to be done by hand because there is no machinery for that.

The Capital of the Company.

President.—In answer to Question 57 you say “Approximately 30 per cent. of our total capital outlay invested in our match business has been incurred on plant and machinery.” I think you rather misunderstood the question. In that capital invested in your match business you include the working capital, don't you?

Mr. Bawaney.—We have not got any separate account for working capital and capital.

President.—What we wanted to know was whether we were to treat working capital as separate for this purpose.

Mr. Bawaney.—This includes all the capital locked up by the Company in the match business.

Dr. Matthai.—Does it include your stock of stores, stock of finished goods and everything else?

Mr. Bawaney.—Yes.

President.—What we meant was the fixed capital which would include buildings, land concession and other things but not the working capital. I will take the two Questions 57 and 62 together. What does this item (e) in answer to Question 62 include?

Mr. Bawaney.—Outstandings, Stock of matches, Raw materials, Advance to contractors and others, and cash.

President.—That is to say this is a sort of floating capital?

Mr. Bawaney.—Yes.

President.—Then the remainder is invested in land, buildings and machinery?

Mr. Bawaney.—Yes.

President.—That comes to about Rs. 10 lakhs out of which about Rs. 9.50 lakhs is plant and machinery?

Mr. Bawaney.—Rs. 16 lakhs up to 30th June 1926; since then we have imported the Simplex and other machinery at a cost of about Rs. 1,50,000.

Dr. Matthai.—What you are suggesting is that this item (d) Rs. 9,62,709 is not included in the machinery that you have bought since 1926.

Mr. Bawaney.—That is correct.

Dr. Matthai.—If you look to the summary of your total cost of machinery, the total purchases, including your local purchases from 1923-26 comes to Rs. 8,95,890, and what you have done here is to include only the purchases up to the end of June 1926. You have excluded the purchases that you have made more recently, say in January or February.

President.—How much have you spent altogether up to date on machinery?

Mr. Bawaney.—About Rs. 11,22,000.

President.—These figures about land and buildings, are they correct or have you any alterations to suggest?

Mr. Bawaney.—No.

President.—Then your total fixed capital comes to about Rs. 17.76 lakhs, or we will call it Rs. 18 lakhs. You take your capacity as 6,000 gross a day?

Mr. Bawaney.—Yes.

President.—That comes to 18 lakhs annually, and therefore the capitalization comes to one rupee a gross.

Mr. Bawaney.—Yes.

President.—But you say in another part of your replies that you have got extra machinery to make another 3,000 boxes?

Mr. Bawaney.—Yes, but these are machines which we have not begun working yet.

Dr. Matthai.—That is included in the Rs. 11 lakhs, is it?

Mr. Bawaney.—Yes. That is Japanese machinery which cost about Rs. 70,000.

President.—That would give you 3,000 extra gross per day?

Mr. Bawaney.—It can, but the working expenses are higher and therefore it is not economical to work the machinery.

President.—That is the only spare machinery that you have got?

Mr. Bawaney.—Yes.

President.—So we will call it Rs. 17 lakhs instead of Rs. 18 lakhs, so that the capitalization comes to just under a rupee a gross.

Mr. Bawaney.—That is so.

Mr. Mathias.—You don't intend to use this Japanese machinery?

Mr. Bawaney.—Not at present.

Mr. Mathias.—Then why did you buy it if it is uneconomical to work?

Mr. Bawaney.—When we bought this machinery we thought the prices of matches would remain at the higher level, but unfortunately prices have gone down and it won't pay us now to work this machine.

Mr. Mathias.—It was really a gamble. Your idea was that if the prices kept up you would be able to get a good return and also part of your capital cost back.

Mr. Bawaney.—At that time the Swedish Trust had not arrived here and we had not to fear the competition from them. We had not even heard that they were going to come here.

President.—Now you say you brought into use this machinery in 1924, but you purchased the machinery in 1922.

Mr. Bawaney.—Yes.

President.—Since then the price of machinery has dropped.

Mr. Bawaney.—Yes.

President.—What do you consider the difference would be?

Mr. Bawaney.—About 30 per cent.

Dr. Matthai.—You bought all these machinery from Germany.

Mr. Bawaney.—Yes.

Dr. Matthai.—You practically got Rs. 7 lakhs worth out of your total Rs. 9 lakhs before the end of 1923.

Mr. Bawaney.—Yes.

Dr. Matthai.—The German exchange was stabilised about the end of 1923. Practically the whole of your purchase was made when the German exchange was distinctly in your favour.

Mr. Bawaney.—We bought at sterling prices.

Dr. Matthai.—That does not matter. What I am trying to get at is this. The President was asking you about the present value of the machinery which you bought. Since you made your purchases, the German prices of machinery in Germany have gone down, but the German exchange has gone up and the rupee exchange has gone up. Have you considered all these factors? Taking all those factors into account at present could you land in India machinery of the kind that you have bought at lower prices than in 1923?

Mr. Bawaney.—We have gone into the matter and we find that we can get it at 30 per cent. cheaper than before.

Mr. Mathias.—What was your depreciation?

Mr. Bawaney.—One year we have written off Rs. 75,000 and another year Rs. 60,000 including building and machinery.

Mr. Mathias.—Altogether you have written off Rs. 1,35,000.

Mr. Bawaney.—Yes.

Mr. Mathias.—Do you consider that your buildings are cheaper to erect now than before?

Mr. Bawaney.—No.

Mr. Mathias.—In your buildings have you used steel?

Mr. Bawaney.—We have only used timber. We have used very little steel.

Dr. Matthai.—Have you got recent evidence about the current prices of machinery as landed in India?

Mr. Bawaney.—Our figures are about 11 months old.

President.—Have you ordered any machinery recently of the same type as you purchased in 1924?

Mr. Bawaney.—Not in 1926.

Dr. Matthai.—Your simplex machine was purchased in February, 1926.

Mr. Bawaney.—This is the first time that we have ordered this machinery.

President.—We can get some idea if you can show that a certain machine was purchased in 1917 at a certain price and in 1926 or later at such and such a price.

Mr. Bawaney.—20 inner drawer machines arrived in January, 1926.

President.—You have got those two purchases. What was the price you paid earlier?

Mr. Bawaney.—We ordered for those machines in 1925 and they arrived in 1926.

President.—Can you give us some more information as to recent prices?

Mr. Bawaney.—If you would like we could send a telegram to Rollers and get you the quotation.

President.—We should like to have that information.

Mr. Bawaney.—Yes. We will supply you with the information.*

President.—As regards your other miscellaneous assets you have given Rs. 18,12,000. That does seem to me a very high figure. Even if we assume that your total works cost were Rs. 15,00,000 a year, it is really on a 15 months turnover.

Mr. Bawaney.—We have got six months stock of chemicals. We always keep a stock worth Rs. 3,00,000.

President.—What credit on sales have you got to give?

Mr. Bawaney.—We give 4½ months credit and every month we turn out Rs. 1,75,000 worth of goods. Our stock of matches is worth Rs. 5,00,000.

Mr. Mathias.—How do you pay your bills? Do you draw a 30 day bill?

Mr. Bawaney.—We pay cash. When we issue letters of credit for all the goods we import from Europe we find that we can buy cheaper.

President.—If your total works cost comes to Rs. 15,00,000, your capital engaged in this business is Rs. 18,00,000. It takes 15 months for a complete turnover. In 12 months you spend Rs. 15 lakhs on the works cost. In order to get that you have to get back Rs. 18,00,000. It means for 14 or 15 months you must go on manufacturing in order to recover your Rs. 18,00,000.

Mr. Bawaney.—We will have Rs. 3,00,000 worth of raw materials on hand. This money doesn't circulate, because as soon as some of the stocks are used up, we have to replace them. We have Rs. 5,00,000 worth of finished matches.

Mr. Mathias.—You say your outturn is 1½ lakhs a month.

Mr. Bawaney.—Yes.

Mr. Mathias.—In 1925-26 your total cost was Rs. 15,00,000.

Mr. Bawaney.—Yes.

Mr. Mathias.—You say generally these costs do not represent your present-day costs. Therefore for calculating 1925-26 costs would you take the working capital as Rs. 8,00,000. I shall show you how I have suggested that figure.

	Rs.
For stores	3,00,000
Cost of 4 months production	5,30,000

The total comes to Rs. 8·3 lakhs. That was approximately your working capital during the year 1925-26.

Mr. Bawaney.—You have omitted certain figures. Even then we have to keep a stock of all matches which you have not taken into consideration.

Mr. Mathias.—In addition to the outstandings.

Mr. Bawaney.—Yes.

Mr. Mathias.—How much would that be?

Mr. Bawaney.—Rs. 4 to 5 lakhs in stock.

Mr. Mathias.—I think you said in answer to a question yesterday that you have more demand than production.

Mr. Bawaney.—We have to maintain a stock to meet all demands. We deliver from stock which is replenished by our daily production.

Mr. Mathias.—Taking your own figures they will come to Rs. 12,00,000 (Rs. 5 lakhs plus Rs. 4 lakhs plus Rs. 3 lakhs).

Mr. Bawaney.—At the time our outstandings were Rs. 7½ lakhs.

Mr. Mathias.—There must be a limit to the outstandings. What is the trade usage as regards credit in the Match Industry?

Mr. Bawaney.—We take promissory notes and sell on a credit of 3 months but we generally recover the money on an average after 4½ months.

Mr. Mathias.—In the Steel enquiry we only took 30 days credit. In your case, three months' credit is what should be taken for the purpose of calculation.

Mr. Bawaney.—Nominally it is 3 months.

Mr. Mathias.—When you take a promissory note, do you not discount it?

Mr. Bawaney.—We don't get any bill of exchange. We get only a promissory note which we don't discount. We simply keep it with us. We are not doing business on borrowed capital. We do business with our own money. The understanding is that we are not to charge any interest. Although it is nominally three months, we give some facilities to our traders. We don't press them for payment as soon as the period of three months expires. They come and make payment according to their convenience. So, on an average, our money comes in after 4½ months.

Dr. Matthai.—The promissory note is simply a documentary evidence of the debt and nothing more.

Mr. Bawaney.—Yes.

Mr. Mathias.—To return to these figures, if you take 4½ months, the working capital will come to Rs. 12 lakhs, viz., Rs. 3 lakhs for raw materials, Rs. 4 lakhs for finished matches and Rs. 5 lakhs for outstandings.

Mr. Bawaney.—At that time our outstandings were Rs. 7½ lakhs. Theoretically, of course, it comes to the figure you quote.

Dr. Matthai.—Suppose you had to borrow your working capital, what interest would you have to pay?

Mr. Bawaney.—One per cent. above the current rate of the Imperial Bank of India.

President.—That is, when your credit is first rate.

Mr. Bawaney.—Yes.

Mr. Mathias.—When you say one per cent. above the Imperial Bank rate, do you mean the official rate or the local rate?

Mr. Bawaney.—I mean the Calcutta rate.

President.—What interest can you get on a fixed deposit from the Chetties?

Mr. Bawaney.—Twelve to fourteen annas per month per hundred. But they lend money at Rs. 1-2-0 per month per hundred.

President.—On a secured loan, they would charge a little less.

Mr. Bawaney.—Yes.

President.—What does the Bank rate work out at on an average, I am talking of the Rangoon rate.

Mr. Bawaney.—Between 7 and 8 per cent. per annum.

President.—They will charge you one per cent. above the average rate.

Mr. Bawaney.—The Bank would charge us one per cent. more than the current rate.

President.—They would take some sort of security from you, I take it. Will you have to get somebody to sign with you?

Mr. Bawaney.—No.

President.—You get an overdraft at 1 per cent. more than the current rate.

Return on Capital.

Mr. Bawaney.—Yes.

President.—As regards the return on capital, your proposal is that a return of 12 per cent. would attract capital.

Mr. Bawaney.—Yes.

President.—That is rather a high rate.

Mr. Bawaney.—From industrial concerns, people expect to get this rate, especially when there are other concerns which give this amount. For instance, the Indo-Burma Petroleum Company pays about 12 per cent. The same is the case with Jute Companies.

Mr. Mathias.—Do the Jute Companies give so much as 12 per cent.?

Mr. Bawaney.—Yes, on an average.

President.—If it is 10 per cent. it is free of income-tax.

Mr. Bawaney.—Yes.

President.—Do you think that under 12 per cent. no capital will be attracted into the business?

Mr. Bawaney.—No.

Mr. Mathias.—You place debentures as high as 9 per cent. Can you justify the rates by quotations from the market?

Mr. Bawaney.—I can't give you any figures.

President.—In the town area, that is what we call the *pucca* area, where the property is freehold, what is the mortgage rate of interest which is usually charged?

Mr. Bawaney.—1 per cent. per annum.

President.—On security in the town area?

Mr. Bawaney.—Yes.

President.—People like Balthazar's who do this business on a large scale probably will charge less.

Mr. Bawaney.—Perhaps they may charge 11 per cent. but never less than 10 per cent. and that would be on very good security. The amount of the loan would be 50 per cent. of the value of the property.

Dr. Matthai.—You have experience both of India and of Burma. Is money generally dearer in Burma than in India?

Mr. Bawaney.—Yes, it is.

Dr. Matthai.—By how much would you put it?

Mr. Bawaney.—Seven to eight annas per month.

Dr. Matthai.—Higher in Rangoon than in Calcutta.

Mr. Bawaney.—Higher than the prevailing rate in Bombay by 7 to 8 annas per month per hundred.

President.—What is the rate between Chetties?

Mr. Bawaney.—Fourteen annas, on an average. We get about 14 annas from the Chetties.

Dr. Matthai.—You get about 10½ per cent.

Mr. Bawaney.—Yes.

President.—Do you get one anna below the Chetty rate?

Mr. Bawaney.—We get the same rate.

President.—You have given us the prospectus of the Assam Match Company in which they put down their working capital at Rs. 1,76,000; that is on an output of 360,000 gross per year. That is 8 annas per gross.

Mr. Bawaney.—They may have to borrow again. In our cost statement you won't find that. You won't find the item of interest anywhere because we do business with our own money. If you have not got your own money you will have to borrow.

President.—According to their calculation it works out to a turnover of 4 months.

Mr. Bawaney.—Yes.

President.—But yours is 15 months nearly.

Mr. Bawaney.—They are selling mostly in India on a cash basis but there is a system of longer credits in Burma.

President.—Why should you not be able to do business on a cash basis?

Mr. Bawaney.—This system is peculiar to Burma and has prevailed for a long time.

President.—We cannot make two different kinds of proposals, one for India and another for Burma.

Mr. Bawaney.—We have to state what our actual position is.

Works Costs.

President.—I now want to go on to your Works costs. As regards depreciation you claim 12½ per cent. on machinery. This is rather too high. 12½ per cent. means 8 years life.

Mr. Bawaney.—The reason why we ask 12½ per cent. is that the match making machinery is too delicate. It has got to be kept up to the mark and must turn out the best quality of matches. If there is any defect in the machine the appearance of the matches will suffer and the quality also will suffer, so the match machinery cannot continue to work with efficiency for as many years as any other machinery would.

Mr. Mathias.—Up to the present time have you taken the depreciation every year out of your profits at 12½ per cent.?

Mr. Bawaney.—The Income-tax department does not allow us to take so much for depreciation. We put the depreciation in our books as much as they allow us—6½ per cent. on machinery and 2½ per cent. on buildings.

Mr. Mathias.—Actually if you consider that the machinery is depreciating at the rate of 12½ per cent. it would be wise to make provision out of your profits because if the machinery deteriorates you won't be able to make profits.

Mr. Bawaney.—What you say is quite correct.

President.—You consider 12½ per cent. ought to be the percentage.

Mr. Bawaney.—Yes, I consider that as reasonable for match machinery.

President.—But that can't be reasonable for the whole machinery surely?

Mr. Bawaney.—It may not apply to the peeling machinery but for others it is reasonable.

President.—In the workshop, the chemical department, label printing department do you want so much?

Mr. Bawaney.—They are all delicate machines. Except the peeling machine and the sawing machine they are like toys; they are extremely delicate.

Dr. Matthai.—You would consider 8 years as the life of your machinery?

Mr. Bawaney.—Yes. If you come over to our works you will see that the Frame filling, Levelling and Drying machines are made of wood and they get worn out in three or four years. In the polishing machine the Drums are all wood.

President.—As regards your works costs you told us yesterday that you would like to treat them as confidential. Do you really wish us to do that? You see, your rivals know what it costs to manufacture matches. You are one of the biggest match manufacturers in India and I think we would be at a very great disadvantage if we cannot disclose the costs. We must have the materials.

Mr. Bawaney.—If you can't help it we have no objection.

President.—Thank you. It makes our work easier. We will first take the statement showing works cost per gross. In the total cost you have shown a great improvement between 1924 and 1925. It has come down from Rs. 1-11-0 to Rs. 1-6-0.

Dr. Matthai.—How many months did you work in 1924-25?

Mr. Bawaney.—The whole year.

President.—Your output nearly doubled in the interval.

Mr. Bawaney.—Yes.

Materials.

President.—You have given the cost of wood for splints and veneer As. 5-3. It is rather a high figure. What price did you take the wood at in that case?

Mr. Bawaney.—We had some Russian wood in stock which is included in this.

President.—It comes to Rs. 51 a ton.

Mr. Bawaney.—Russian wood coming from Japan cost us from Rs. 127 to Rs. 130 a ton.

President.—I think we might take it at 4 annas a gross approximately.

Mr. Bawaney.—No, because it does not include the cost of case, because for four or five months in the beginning we were not sending matches to India and therefore we were not giving cases but in the end of 1926 there are some which included cases.

President.—If you reduce the cost of wood for splints and veneers we have to add 25 c.ft. for boxes so that it will come to very much the same thing.

Mr. Bawaney.—It will come to about 6 annas per gross because it will take half a cubic foot of wood and calculating at 12 annas per c.ft. at the rate of Rs. 35-8-0 a ton it comes to six annas.

President.—Have you got the figures that I asked for about quantities and prices?

Mr. Bawaney.—The figures for 1924 and 1927 are not ready.

President.—What is the last month for which you have got complete accounts?

Mr. Bawaney.—We go into the figures at the end of every year. We cannot prepare this before the 30th June.

Mr. Mathias.—As regards this cost of wood you have told us that in the year 1925-26 owing to the inexperience of the workmen a good number of splints and veneers were spoilt. I think it came to about 40 per cent. in 1925 and it has been since reduced to 15 per cent.

Mr. Bawaney.—These figures for 1925-26 are figures for the whole of 1925-26 from 1st July 1925 to 30th June 1926.

Mr. Mathias.—Since 1st July 1925 there has been considerable improvement.

Mr. Bawaney.—That is so.

Mr. Mathias.—So that quite a considerable proportion of the splints and veneers which were previously spoilt are now turned out in a satisfactory condition?

Mr. Bawaney.—We have not gone into the exact figures but there has been considerable improvement.

Mr. Mathias.—And that would of course affect the cost of wood if you make more splints and veneers, would it not?

Mr. Bawaney.—Yes, there would be a certain reduction in cost.

Mr. Mathias.—Might we put it somewhere about 9 pies?

Mr. Bawaney.—From 3 pies to 6 pies. I can't give exact figures, I am afraid.

Mr. Mathias.—But this 6 annas that you have given is an average figure, is it not?

Mr. Bawaney.—Yes.

Mr. Mathias.—In 1925, at any rate in part of it, almost half of the wood which was used for veneers was spoilt?

Mr. Bawaney.—In the beginning it was 40 per cent.; there has been great improvement since then.

Mr. Mathias.—At present it is about 15 per cent., is it?

Mr. Bawaney.—At present we are losing about 25 per cent.

Mr. Mathias.—I understand you expect in the future to be able when your workmen become more experienced to reduce that to about 5 per cent.

Mr. Bawaney.—When the workmen become efficient it is possible that the wastage would be reduced to 5 per cent.

Mr. Mathias.—Not at present, but in the future when your workmen are fully trained—not necessarily working in your factory, but in some other factory—is it possible to reduce this figure of annas 6 and if so by how much?

Mr. Bawaney.—About 20 per cent.

Mr. Mathias.—That will be a reduction from annas 6 to annas 4 pies 6.

Mr. Bawaney.—A little more than 4½ annas.

Mr. Mathias.—We may take it at 4½ annas roughly.

Mr. Bawaney.—Yes, if the price of wood remains about the same.

Dr. Matthai.—This reduction in the cost of wood from 1924-25 to 1925-26 is partly the result of improvement in the efficiency of your labour and partly the result of reduction in the cost of labour.

Mr. Bawaney.—Yes.

Dr. Matthai.—You said in reply to Mr. Mathias that you expect in the future a reduction to somewhere about 20 per cent. on account of the improvement in the quality of labour.

Mr. Bawaney.—Yes.

Dr. Matthai.—Did that 20 per cent. occur as between 1924-25 and 1925-26?

Mr. Bawaney.—Yes.

President.—As regards the cost of papers for labels and wrappers, I want to ask you a general question. You have made this Table II by simply dividing the number of boxes.

Mr. Bawaney.—Yes.

President.—How do you keep your works cost sheets?

Mr. Bawaney.—We don't maintain cost sheets.

President.—If you don't keep your works cost separately, how can you check the progress in the works?

Mr. Bawaney.—We are considering the matter and thinking of introducing the system of cost sheets.

President.—In a very big factory like yours, it is important that you should have cost sheets.

Mr. Bawaney.—We are going to overhaul our account system altogether. We will analyse every year the costs under each head.

President.—For instance take the case of chemicals. You would not know whether any chemicals are wasted or not if you don't keep cost accounts.

Mr. Bawaney.—That is so.

Mr. Mathias.—If you don't know your cost, you would not know how much you would be able to reduce your rates.

Mr. Bawaney.—Quite true.

Mr. Mathias.—With regard to the cost of papers for labels and wrappers, when your workmen become efficient I suggest that in future it might be possible for you or to some other factory to reduce from one anna to 9 pies.

Mr. Bawaney.—I don't think it would make much difference in the cost of wrapper. There is not much wastage in paper.

Mr. Mathias.—I say not so much in your factory but in big factories, sometimes the machine jumps and 4 or 5 boxes get spoilt with the paper on them. That also happens in your factory, I take it.

Mr. Bawaney.—If we are making 11 lakhs of boxes in a day, and if during the day 5,000 boxes are spoilt, it would not amount to a great percentage. Sometimes when boxes are spoilt, they can be repaired.

Mr. Mathias.—The amount of wastage was very considerable in the beginning.

Mr. Bawaney.—We were then spoiling a lot of boxes, but not paper.

Mr. Mathias.—In future even when your own works and similar works would reduce the rejected boxes to 10 per cent., the cost would still stand at one anna for labels.

Mr. Bawaney.—There would not be much difference. As regards paper even in 1924-25 and 1925-26 it remained the same.

President.—As regards the cost of chemicals, you have brought down the cost from annas 3 pies 3 to annas 2 pies 6. What is that saving due to?

Mr. Bawaney.—Formerly we were using most of the chemicals from Japan. Now we are importing from Germany and elsewhere and we get better purity and consequently use less chemicals. We have reduced the proportion of some of the costlier chemicals and use the cheaper ones which will do for our purpose. We are going into the matter. The more we understand the business the more we can see the direction in which it is possible to reduce our cost.

President.—Do you expect any further reduction in the cost of chemicals when your output increases?

Mr. Bawaney.—I don't think there would be any reduction in the cost of chemicals, because the quantity required would be in proportion to the matches produced.

President.—You can get more out of the same quantity when you are making larger quantities.

Mr. Bawaney.—There is no wastage in chemicals. At the most we may be able to improve the cost by a pie or two pies.

Dr. Matthai.—You don't think as a result of further experiments in your factory, you can economise still more in the use of costlier chemicals.

Mr. Bawaney.—We don't think there will be any such improvement, because so far we have done all the experimenting work that was to be done.

Dr. Matthai.—These chemicals that you are now getting from Germany, are they more expensive than the chemicals you used to get from Japan?

Mr. Bawaney.—The Japanese chemicals were cheaper in price but the purity of the German chemicals is higher. We get more percentage of the constituent. Although apparently it costs more, it is cheaper.

Dr. Matthai.—Quality for quality German chemicals are less expensive.

Mr. Bawaney.—Quality for quality the German chemicals are cheaper, but quantity for quantity the Japanese chemicals are cheaper. It is quite possible that the cost of chemicals may go up by a pie or two when we try to make these more damp proof than they are at present.

President.—Impregnating may also increase.

Mr. Bawaney.—Yes.

President.—It may remain more or less in the neighbourhood of these figures.

Mr. Bawaney.—Yes.

President.—What are these other raw materials in which there is a substantial reduction from annas 3 pies 3 to anna 1 pies 7?

Mr. Bawaney.—Soldering hoops, nails, etc.

Mr. Mathias.—Do you include zinc sheet in that?

Mr. Bawaney.—Yes.

Dr. Matthai.—Do you call glue a chemical?

Mr. Bawaney.—Yes.

Mr. Mathias.—And wax?

Mr. Bawaney.—Yes.

Mr. Mathias.—Is match paper, blue and green, included in the cost of other raw materials?

Mr. Bawaney.—The cost of paper, labelling, printing paper and wrapping paper is included in the cost of other raw materials.

Dr. Matthai.—Glass powder.

Mr. Bawaney.—In chemicals.

Mr. Mathias.—All paper is included in item No. 2.

Mr. Bawaney.—Yes.

President.—Does printing ink come under chemicals or what?

Mr. Mathias.—May we take it that item No. 4 "Cost of other raw materials" practically represents the cost of zinc sheets?

Mr. Bawaney.—Under other raw materials are included zinc sheets, labels and printing ink. Formerly we were importing labels, but now we have a printing machine. It is not cheaper to print the labels here but the advantage is that we have not to keep a large stock of labels. If we get them printed in other countries, we have to keep a large stock of labels. When we print labels ourselves, we have not to keep a large stock of labels of different kinds, so there would not be any improvement in the cost of labels.

President.—You get certain paper from Sweden and certain paper from Japan.

Mr. Bawaney.—We buy label printing paper from Japan and all the rest through our agent in Europe. He buys for us from whichever place he gets cheapest.

Labour.

President.—The biggest item in this list is labour which is higher than I should have expected. The smaller factories say that their costs come to about four annas.

Mr. Mathias.—Does your labour include supervision?

Mr. Bawaney.—It includes the Manager.

President.—It is a big item and I should look forward to a large economy in that.

Mr. Bawaney.—It comprises 31 sub-heads.

President.—You have not given us any charge for general supervision.

Mr. Bawaney.—All that is included in labour.

President.—The total expenditure under factory labour comes to Rs. 5½ lakhs. How much of that would you assign for supervision?

Mr. Bawaney.—About Rs. 50,000, for Manager, Engineer, Chemist, and experts.

President.—What experts?

Mr. Bawaney.—The machinery experts.

President.—The rest (Rs. 5½ lakhs minus Rs. 50,000) comes under ordinary factory labour.

Mr. Bawaney.—Yes.

President.—In 1924-25 your factory labour came to about Rs. 3,10,000 and your output was 5,00,000 gross. Then your output went up to nearly 10,87,150 gross—about double—and the wages did not go up in the same proportion.

Mr. Bawaney.—At the end of 1924, we were using inner and outer boxes imported ready made from Japan. In October 1924, we started our peeling machine. So from June to October, this expense was not necessary.

President.—Under what head did that come?

Mr. Bawaney.—From July to October, all the labour charges on box making were saved because we were using ready made boxes imported from Japan.

President.—Under what head have you put it?

Mr. Bawaney.—Under heading No. (4) Cost of other raw materials. You will see that there is a reduction in that.

President.—The increase may be taken more or less in the same proportion as the increase in the output. What I am trying to point out to you is that factory labour in 1924-25 included the cost of boxes.

Mr. Bawaney.—Yes, for three months.

President.—It was included in the cost of other raw materials.

Mr. Bawaney.—Yes.

President.—How much did you save in that way?

Mr. Bawaney.—About Rs. 12,000.

President.—That would come to Rs. 3,20,000.

Mr. Bawaney.—Yes.

President.—Then, the labour went up to Rs. 5,50,261.

Mr. Bawaney.—Yes, when the output was nearly doubled.

President.—When your output goes up to 18 lakhs from 10 lakhs, what saving do you expect? By how much would you have to increase your labour charges?

Mr. Bawaney.—We think that there would be a saving of 10 to 15 per cent. in labour charges.

President.—It should be more. The reduction as compared with 1924-25 is more than that already.

Mr. Bawaney.—In 1924-25, our labour was absolutely raw.

President.—In spite of that you saved Rs. 97,000.

Mr. Bawaney.—In 1924-25, the labourers were absolutely raw hands. So, there was a saving when they improved in 1925-26. Now we cannot make a very great saving as compared with 1925-26.

Dr. Matthai.—Has there been any change in the rate of wages?

Mr. Bawaney.—No.

Mr. Mathias.—Even if your output increases to 18 lakhs you will employ no more labour.

Mr. Bawaney.—Not in certain processes. For instance, for carrying splints, we will require more labour.

Mr. Mathias.—Your labour on the peeling machines and chopping machines would be the same.

Mr. Bawaney.—Yes, but in the case of frame filling and other machines, we will have to pay more in the form of bonus.

President.—Take the Simplex machine. It is cheaper than frame filling.

Mr. Bawaney.—We are still doubtful about the Simplex machine. We are not sure whether we would be able to work it successfully or not. The difficulty about the Simplex machine is that if anything goes wrong, the whole thing will have to be stopped.

President.—If the machine is a good one, it must lead to a reduction in the operating cost.

Mr. Bawaney.—If we are able to work the Simplex machine successfully, then there would be a little reduction but not much.

President.—In your case there is no reason at all—unless of course the cottage factories are sweating their labour—why your labour should cost as much as eight annas when their costs are only about 4½ annas.

Mr. Bawaney.—I have already explained to you that it must cost us more for our factory labour than a cottage industry.

Mr. Mathias.—Do you pay the same piece rate as the cottage industry?

Mr. Bawaney.—We pay the same rate for box filling.

President.—When you adopt machine filling, would it not cost you less?

Mr. Bawaney.—Yes, only if we employ all the Simplex machines.

President.—Can you give me a comparison between the costs of working on the Simplex machine, that is doing everything by machinery, and the costs of working by hand labour. In the case of the Simplex machine, everything would be done by machinery right up to despatch really speaking.

Mr. Bawaney.—Yes.

President.—If you work under those conditions, I should like to know whether there would be any reduction from eight annas to about four annas.

Mr. Bawaney.—No it cannot be reduced from 8 annas to 4 annas, but there will be some reduction because salaries include all expenditure on supervision, stationery, telegrams, and everything else.

President.—What I want you to do is to separate the actual factory labour from the other factory charges. Can you give me a separate list?

Mr. Bawaney.—Yes.

President.—What is the salaried establishment?

Mr. Bawaney.—Rs. 3,34,655 including office staff and manager.

President.—In that establishment would there be a proportionate increase if your output went up from 11 lakhs to 18 lakhs? You are not going to have any more machinery; your factory is equipped to produce 6000 gross a day, is it not?

Mr. Bawaney.—Yes.

President.—Of course when the output increases there will be more materials to fetch and more materials to remove and so on, but I don't see why you should have any other increase?

Mr. Bawaney.—Those persons who are removing the materials are salaried workmen, but to people making boxes we pay a bonus, a fixed salary *plus* a bonus for increased output.

President.—Can you give me the amount of the total bonus in the year?

Mr. Bawaney.—Rs. 23,246 for 1925-26.

President.—You may say that the bonus may be doubled. You have given me the number of salaried men and there will be an increase in the salaried men if you are to remove more materials, but as regards the rest there should not be any great increase. What I mean to say is that for half the expenditure that you now incur there won't be a large increase, but as regards the other half there may be an increase in the same proportion as the increase in output. Taking it that way can you give me an estimate of how much you can reduce?

Mr. Bawaney.—At the most 12½ per cent. All the higher salaried men are included in this 8 annas, also bonus, overtime and things of that sort. There cannot be much reduction.

President.—If you say that the industry is not going to make any progress at all you are weakening your case. I want to satisfy myself that you are going to make some progress, but if you are going to keep your cost as it is now you are weakening your case. I am not talking of the present moment, but say four or five years hence you ought to be able to show some progress. If you keep your costs at that you won't be able to show that you can do without protection.

Mr. Bawaney.—As I explained before, when our men become more efficient we won't require these experts whom we now employ and that will mean a saving of Rs. 25,000 a year. Then again we can reduce the salaried staff.

President.—Under the head "ordinary current repairs" you have got a big charge of Rs. 1,12,000. It is more than your depreciation. It is rather a heavy charge?

Mr. Bawaney.—The figures for 1924-25 were not debited in that year so they have been included in 1925-26.

President.—What should we take per gross on the total output?

Mr. Bawaney.—It would be about an anna.

Power and Fuel.

Dr. Matthai.—What do you include in your power and fuel? Is it entirely electricity?

Mr. Bawaney.—In 1924-25 we had to use fuel in addition to the electric current, now we are not using fuel.

Dr. Matthai.—In 1925-26 the price that you include here, does that mean both electricity and fuel?

Mr. Bawaney.—Yes, electricity as well as fuel.

Dr. Matthai.—In your written statement you have told us that the cost of electricity per 100 gross was Rs. 2-12-0. That works out to 5 pies per gross. That I take it would be your future cost for your power, that is to say you can reduce this 10 pies to 5 pies?

Mr. Bawaney.—I think in future it would come to about 9 pies.

Dr. Matthai.—I thought you got this figure of Rs. 2-12-0 on your recent experience?

Mr. Bawaney.—Our electricity bill consists of two parts, so much per H. P. and so much per unit. The figure we have given of Rs. 2-12-0 is only approximate. I think if we keep it at 9 pies it would be a fair charge.

Mr. Mathias.—This Rs. 2-12-0 includes both horse power and unit charges? Why should you say 9 pies is a fair charge?

Mr. Bawaney.—We have worked it out on the basis of so many working days a month and dividing it on that basis we have arrived at what it would come to per gross.

Mr. Mathias.—Then Rs. 2-12-0 is not an exact estimate at all?

Mr. Bawaney.—It is only approximate.

Current Repairs.

Mr. Mathias.—What is included in this item “ordinary current repairs”?

Mr. Bawaney.—Reclamation, that is levelling of the lands, etc., repairs to the walls, boiler repairs and so on.

Mr. Mathias.—What is the biggest item in this?

Mr. Bawaney.—General stores and machinery parts.

Mr. Mathias.—General stores are not current repairs?

Mr. Bawaney.—Belting, oil, bolts and nuts and things of that sort that are used in repairs we have included in current repairs.

Mr. Mathias.—Do you mean to say you used all these bolts in a year?

Mr. Bawaney.—Yes.

Mr. Mathias.—The other big items are stores, repairs and improvements. What exactly are the stores?

Mr. Bawaney.—Oil, bolts and nuts, belting, soldering, etc. There are about 200 items.

Mr. Mathias.—Instead of putting oil under a separate head and so on you have lumped together these minor items.

Mr. Bawaney.—Yes.

Mr. Mathias.—You do not include oil under a separate heading nor under miscellaneous.

Mr. Bawaney.—No.

Miscellaneous charges.

President.—What is included under miscellaneous?

Mr. Bawaney.—Commission to our European agent, commission to the Japanese agent, Municipal tax, land revenue tax, godown rent, fire insurance.

President.—All these expenses would not go up when the output increases.

Mr. Bawaney.—Only insurance might go up.

Mr. Mathias.—Why has it gone up from anna 1 pie 1 in 1924-25 to anna 1 pies 4 in 1925-26?

Mr. Bawaney.—Insurance and godown rent have gone up.

Mr. Mathias.—It doesn't include any allowance for bad debts.

Mr. Bawaney.—No.

President.—You have bad debts along with depreciation.

Mr. Bawaney.—Yes.

President.—How much do you include for bad debts?

Mr. Bawaney.—Rs. 30,000.

President.—As much as that.

Mr. Bawaney.—At that time we had Rs. 7 lakhs outstanding.

President.—That is a big percentage.

Mr. Bawaney.—On an average we must have Rs. 35,000 as bad debts. We are doing about Rs. 20 lakhs business in a year. All are on credit.

President.—In these costs that you have given, where have you entered the commission that you have to allow to your agents? Has it gone in here?

Mr. Bawaney.—No.

President.—Do you have to add the commission to this?

Mr. Bawaney.—It will have to be added. It comes to about anna 1½.

Total costs.

President.—Let us take your figures for the present. It is just now Re. 1-6-2. To that you have to add anna 1 pies 6 commission which brings it up to Re. 1-7-8. Now you have got to add to that depreciation, interest on capital, is it not so?

Mr. Bawaney.—Yes.

President.—Now you want 6½ per cent. depreciation on machinery. You gave the value of your machinery at Rs. 11 lakhs.

Mr. Bawaney.—Yes.

President.—6½ per cent. of that is Rs. 66,000.

Mr. Bawaney.—Yes.

President.—We will have to take your full output as 18,00,000 of gross boxes. It comes to pies 7 per gross.

Mr. Bawaney.—About that.

President.—Your total investment comes to Rs. 35,00,000 roughly.

Mr. Bawaney.—Yes.

President.—12 per cent. on Rs. 35 lakhs comes to Rs. 4,20,000, so it would be about annas 3 pies 8.

Mr. Bawaney.—About that.

President.—That comes to Re. 1-12-0.

Mr. Bawaney.—Yes, on the basis of Re. 1-6-2 as cost.

President.—The import price is now Re. 1-4-0 so that you have got to reduce your cost by at least annas 8 to do without protection.

Mr. Bawaney.—Yes.

Mr. Mathias.—Assuming that there is no prejudice in favour of the foreign matches.

Mr. Bawaney.—Yes.

President.—You must show that you can reduce your costs by this amount.

Mr. Bawaney.—When the matches become better known and the prejudice is gone, we won't have to sell on as long a credit as we do now. There will be a saving of interest on Rs. 7,00,000. When the demand increases, we won't have to keep a big stock. As we produce we will supply direct from the factory to the trader. Perhaps we would have some orders on hand which we would take sometime to supply. Thus we will have a saving of interest on Rs. 5,00,000. That would make a reduction of Rs. 12,00,000 in the capital account. As our workmen become more efficient and as our daily output increases, we will be able to reduce our piece rate.

President.—About annas 4 to annas 6 when the industry is on a good footing, when the prejudice is gone and when you are able to organise your sales better.

Mr. Bawaney.—Yes.

Selling price.

President.—The present position is this: Matches are being sold at about Re. 1-6-0 to Re. 1-8-0 in the country. If there were no matches manufactured in the country and even if we took the average import price of foreign matches, they would sell at Rs. 2-12-0 after paying the duty.

Mr. Bawaney.—About that.

President.—At present you require Re. 1-12-0. Is there any reason—supposing the Government wanted revenue—why the price of matches in the country should not be raised to Rs. 2-8-0 by levying an excise?

Mr. Bawaney.—This can be done when the Government totally stops the importation of foreign matches.

President.—Annas 12 or Re. 1 excise is put on and the duty is also raised to Rs. 2-4-0 or Rs. 2-8-0.

Mr. Bawaney.—At present the difference between the two rates is Re. 1-12.

President.—Re. 1 excise and Re. 1 extra duty would leave you where you are.

Mr. Bawaney.—Foreign matches will command 50 per cent. of the sales.

President.—Why should they? Their price will go up by Re. 1.

Mr. Bawaney.—Both the prices will go up. If this excise duty is levied now and an addition is made in the import duty, we will be left where we are. The position will remain the same.

Mr. Mathias.—Except that the imported matches will be so much more expensive that the people who at present use them may not be prepared to pay so much for them and may be prepared to take your matches.

Mr. Bawaney.—The public won't be affected much. The man who pays one and a half pice will have to pay 2 pice and he will be prepared to pay if he has the prejudice.

President.—Does there not come a stage when the consumer will say, however prejudiced he may be, "if the prices are pushed up I cannot pay so much, I will buy the Indian match for 1½ pice."

Mr. Bawaney.—So far, our experience has been that people prefer to buy the Swedish matches even though their costs are 50 to 100 per cent. higher than ours.

Mr. Mathias.—That is at your present price. If the prices are put up, it would be very much more expensive to buy foreign matches.

Mr. Bawaney.—It is not such a dear commodity that people would hesitate to buy at 2½ pice per box.

Dr. Matthai.—The imported matches are selling at Rs. 2-12-0 per gross. Add another Re. 1-8-0 to that and make it Rs. 4-4-0. Do you mean to say that there would be the same demand for imported matches at Rs. 4-4-0 per gross as there would be at Rs. 2-12-0 per gross?

Mr. Bawaney.—If the prices of our matches remained stationary, then of course the demand for foreign matches would fall off considerably.

Dr. Matthai.—The way I look at it is this. There are people who buy imported matches and they say "it will be worth while to buy these matches at Rs. 2-12-0 per gross but as the price has gone up to Rs. 4-4-0 I am not prepared to pay so much. I would rather buy locally made matches which I can get at somewhere about Rs. 2-8-0 per gross which will serve my purpose equally well."

Mr. Bawaney.—If the consumers were to think on those lines, they would undoubtedly stop buying foreign matches.

President.—A man may buy foreign matches at Rs. 2-12-0 per gross but may not buy them at Rs. 4-4-0 per gross.

Mr. Bawaney.—So far as my belief goes, I think that if our prices are also raised and if the Swedish matches cost only 50 per cent. or so more as they are doing now, the sales of foreign matches won't fall off.

President.—You are not asking for any increase in the duty. You only want the same duty to be retained. By not raising the duty, how will you be able to push out the Swedish matches from the country?

Mr. Bawaney.—If no excise duty be levied on indigenous matches and if the duty be increased by eight annas on foreign matches, the sales of foreign matches will fall off. That is the only way. We are afraid that if the duty of Re. 1-8-0 were to be reduced, the Swedish matches would command even more sales than they are doing now. So, we say that to maintain the present position, the duty should not be reduced. But if the Indian

matches are to command a bigger sale, then the duty should be increased by eight annas.

Mr. Mathias.—I say that your sales will steadily increase as the quality of your matches becomes known.

Mr. Bawaney.—But that will take time.

Mr. Mathias.—The import figures indicate that that process is fairly rapid. The imports have been reduced by one half in three years.

Mr. Bawaney.—Hereafter the reduction won't be so rapid because we are not able to make much more headway amongst those poor customers who have to buy the cheapest kind they can get. They are already buying our matches. The rest are people who can afford to buy matches at a higher price. To make them buy our matches would take a long time. They could only be converted gradually. So, we cannot go on the basis of the figures of the last four years.

Mr. Mathias.—The reduction in the import of matches has been greater. You cater for poor people. You expect that the reduction would be more rapid in the beginning.

Mr. Bawaney.—In the beginning, the poor bought our matches because they were cheap. But the quality was then bad and they became prejudiced and stopped buying. Again when the quality improved, they began to buy. They are buying again as they appreciate our quality.

Mr. Mathias.—I suggest that the rich people will also buy your matches as soon as the quality becomes generally known.

Mr. Bawaney.—I admit that but what I say is that it will take time. I also think that the rich also will be converted gradually as they come to realise our quality. Their conversion will not be so rapid.

Mr. Mathias.—I understand that you have no difficulty in selling your matches.

Mr. Bawaney.—At present we experience no difficulty.

Mr. Mathias.—You are selling your matches at remunerative rates.

Mr. Bawaney.—I don't think that we are making any profit at present.

President.—We will take these figures which you have given for the sake of argument. Supposing to-day there is a prejudice in their favour of about fourteen annas, part of it may be due to the difference in quality and the money value of the prejudice may be ten or twelve annas. Supposing the duty was raised to Rs. 2 (Rs. 2-12-0 per gross plus 0-8-0) then their price will go up to Rs. 3-4-0. If we put on an excise duty of one rupee, then the duty will have to be raised to Rs. 3, so that their price will go up to (Rs. 3-4-0 plus Re. 1) Rs. 4-4-0. Supposing your fair selling price is Re. 1-12-0, then your price would come to Rs. 2-12-0. That would give you an advantage over the foreign article to the extent of Re. 1-8-0 (Rs. 4-4-0 minus Rs. 2-12-0).

Mr. Bawaney.—Then we would be able to cover the ground at present covered by them.

President.—And the Government revenue will be what it was before more or less.

Mr. Bawaney.—It would be more.

President.—It is now Re. 1-8-0 on the imports. There would be one rupee excise and Rs. 3 on the imports.

Mr. Bawaney.—Government will gain in other ways also. Government will get additional revenue in the shape of Customs duty on the materials imported by us. They will get royalty on the wood consumed by us and they will get additional income-tax.

President.—In order to leave the Government where it would have been, if there had been no manufacture of matches in India, it might be necessary to increase the import duty by Re. 1-8-0 and to impose an excise duty of one rupee per gross. Then, there is the Swedish Company in the country itself. What about that?

Mr. Bawaney.—That requires deep consideration.

Conditions of extracting timber.

Mr. Mathias.—In your reply to question 99 (a) you say that efforts should be made by Government to grow suitable species of wood in India and Burma. You don't suggest, do you, that Government should undertake to plant these species even if they proved to be unremunerative?

Mr. Bawaney.—No, we don't want the Government to be a loser by doing it, but I don't think they will lose.

Mr. Mathias.—In reply to question 99 (b), you say that in Burma instead of inviting tenders for leasing forests Government should fix the minimum rate of royalty. Would not that give rise to complaints that one company is being favoured at the expense of another? We have heard the same suggestion from the Muslim Match Factory. They also thought that there would be some difficulty. But their point of view is that Government should fix a small royalty and that Government should give the right of extracting wood to the small factories who employ hand labour.

Mr. Bawaney.—But the forests of Burma would be able to supply all the requirements. If, instead of asking for tenders, Government were to fix a reasonable royalty and allot to the various manufacturers forests sufficient for their requirements, the big manufacturers won't be able to shut out the small manufacturers. Suppose there are two factories each requiring 5,000 tons; one has got forest sufficient for its requirement and then Government calls for tenders for another forest which yields 5,000 tons. The other factory which has already got a forest may tender for this one at a higher rate and the other factory won't be able to get the forest.

Mr. Mathias.—Just so. Consider what would happen in the case of fixing a minimum royalty. Your suggestion is that Government should divide up the forests and give one to one factory, one to another and so on. Now, you have got these two forests. I gather from the evidence which was tendered by the other match factories that they would like very much to have the forests which you hold. If the royalty had been fixed how was Government to decide which of those match factories should have a particular block.

Mr. Bawaney.—Government could allot to them in proportion to their requirements.

Mr. Mathias.—My point is this. Your answer overlooks the most important thing, namely that if one factory gets a forest which is more conveniently situated for cheap extraction, then the other will complain that this factory has been given preference; they will say "it is just the forest we wanted."

Mr. Bawaney.—But there is another disadvantage in calling for tenders. The forest department has not as yet made a complete investigation into the matter of the supply of match wood. Suppose a factory sends its own men and finds a convenient forest, it will approach Government and say "this is the forest we want." Then Government calls for tenders and another person tenders at a rupee higher than what he offers. Then the latter will get the forest and all the trouble taken by the factory will be wasted. One man takes the trouble and the other man gets the benefit. If Government does not have enquiries made about suitable forests the match manufacturers also won't do it and then things will remain the same.

Sea freight.

Mr. Mathias.—I am afraid that does not answer my question. Then in answer to question 99 (d) you say "The freight by sea on matches exported from Burma to India is high at present and should be reduced." That is a matter of arrangement between match companies and shipping companies, is it not?

Mr. Bawaney.—We are merely placing our difficulties before Government so that if there is anything that can possibly be done, they might do it.

Import duties on Chemicals, etc.

Mr. Mathias.—The same thing applies to chemicals and papers, etc., when you suggest in answer to (c) that the import duty on chemicals, papers, etc., should be reduced. Having regard to what the President told you the other day regarding the scope of this enquiry and the need of suggesting means by which Government can recoup the revenue lost by the decrease in the import of matches, you would hardly suggest that further reductions should be made. Then in (f) you say "The rates of municipal taxes are too high at present and should be reduced." You would not really suggest that this Board should take up the whole question of municipal taxes with reference to the match enquiry?

Excise on factories run by foreign capital.

President.—Let us revert now to the question of excise. If we increased the duty to, say, Rs. 3 and levied an excise of one rupee, it will give to the Indian manufacturer an advantage of at least Re. 1-6-0. If the costs go down by 4 annas or 6 annas it will give him still greater advantage. In that case the Swedish company here will also get the benefit and it will be able to compete better against you. In such a case what would you propose?

Mr. Bawaney.—We propose that if an excise of one rupee be levied on us then on companies with foreign capital the excise duty should be higher.

President.—Don't you see they do not come here as a Swedish company, they call this an Indian company. They are trying to get round the law or get round the prejudice whatever you like to call it, in the country. They come here, they stand behind Indian names; they raise Indian rupee capital and call it an Indian company.

Mr. Bawaney.—Their aim is to control the match business all over the world and if they can find any loophole they will take advantage of it and therefore it is the business of Government to see that they cannot get a loophole, and can't come into India.

President.—If it is a *bonâ fide* Indian company it is a different matter, but if the Government came to the conclusion that it was a Trust which was to the prejudice of the country, then they might declare any Trust illegal and in that way something may be done, but short of that, if it called itself an Indian company, you cannot suggest that discriminating excise should be levied?

Mr. Bawaney.—From the prospectus you will be able to see what is their aim. There is another way in which they would act. Formally they would start an Indian company and then they would go on suffering losses so that the Indian shareholders will get tired. Then they would get hold of these shares and control the whole thing. In this way they will make the Indians lose their capital for their own benefit. We are afraid that unless there is some provision these people will crush the industry some day and will have all the Indian match business in their own hands as they have done in other parts of the world.

President.—That is just the point; if what you say is true what methods would you suggest to prevent this?

Dr. Matthai.—When Government grant bounties to Indian companies, they say the company must be registered in India, the capital must be on a rupee basis, it must have a certain number of Indian directors and it must give training to Indians. Suppose all these points are satisfied by this company, how are we to proceed?

Mr. Bawaney.—They are certainly not of such a charitable nature that they will train up Indians so that the industry of their own country might suffer.

Mr. Mathias.—The point is this: all these conditions may be imposed, but having imposed them it will be extremely difficult to enforce any sort of discriminating excise, one amount on the Indian firms and another amount on the foreign firms, because there is no means of discriminating between the two.

Mr. Bawaney.—It would be quite easy to find out whether the financing is done by the Swedish Trust.

Mr. Mathias.—I think it is extremely difficult to find out. It may raise all the capital in India and there may be Indian directors?

Mr. Bawaney.—Government may have a penal clause for such underhand tricks.

Mr. Mathias.—You have got to prove an offence first.

President.—The point is this, supposing first of all, as I pointed out to you, the existence of the Trust was established it must be shown that it was working to the prejudice of the country. When both these things have been established then we have got to consider whether there are any practicable remedies to be applied. Now, as regards the Trust what evidence have you got that it is a Trust?

Mr. Bawaney.—I have got their balance sheet of 1924 which will show that it is a Trust (handed in).

President.—It does appear that it is their intention apparently to establish themselves in as many countries as possible. We shall examine the Swedish Company on these points. We have also other documents in our possession. I do not wish to examine you on these points. So far as you are concerned did they make any attempt to acquire your business?

Mr. Bawaney.—They did.

President.—When was this?

Mr. Bawaney.—March, 1925.

President.—That was after they issued their new capital in England in 1924.

Mr. Bawaney.—Yes.

President.—What was the proposal made to you?

Mr. Bawaney.—They told us that their idea was to control the match industry all over the world and that we would not be able to compete against them and make a profit and that if we wanted to sell our factory, they would buy it up at whatever it cost us.

President.—Did they offer you the cost price? There was not anything wrong in that. It was a business transaction.

Mr. Bawaney.—At that time the price of machinery had fallen down, but they said that they would reimburse us by paying whatever it had cost us. They informed us that they had 80 years' experience of this business; they were manufacturing their own paper, the machinery and also the chemicals; and that in these circumstances it would not be possible for us to compete with them successfully. They asked us to consider all these things over well. They also said that it was a golden opportunity for us and that we should not let it go. If we sold our factory we would get back our money and we would not get such an opportunity afterwards.

President.—Have you got a written document to prove it?

Mr. Bawaney.—This is the copy of a letter dated 16th April, 1925, from Mr. Littorin (handed in).* This was written after the negotiations had fallen through.

President.—Here they suggested as though they wanted to do business with you.

Mr. Bawaney.—We replied that we would not sell the factory. In any case we wanted to keep the factory. Then they proposed that we should do business jointly. They said that if we let them have the management of our factory on account of the long experience they would be able to do everything well and cheaply as if it was a Swedish factory.

President.—What interest did they offer you in this partnership?

Mr. Bawaney.—They offered us 40 per cent. and they wanted to take 60 per cent.

* Supplementary Statement No. 3.

President.—They wanted that in order to have control?

Mr. Bawaney.—Yes. There was a condition that in three or four years' time if we were not making a profit, they would give us 6½ per cent. on our 40 per cent. and buy up our 40 per cent.

President.—They insured themselves by 6½ per cent.?

Mr. Bawaney.—Yes and we thought that their policy was to make us lose, to get us tired and after buying up our share to have full control.

Mr. Mathias.—Exactly what does the proposal amount to? If, in three or four years' time, you made no profits, they should have the option of paying you 6½ per cent.

Mr. Bawaney.—We would have the option. We would ask them 25 per cent. more on this as interest and hand over the factory to them.

Mr. Mathias.—There was nothing binding on you. It was left entirely to you.

Mr. Bawaney.—That is true. If they are going to make us lose every year about 20 per cent. instead of incurring that, we would prefer to get 105 per cent. by selling our interest.

President.—Your case is that they were insuring themselves in this way so that they might get control of the whole business after 4 years by paying 6½ per cent. on your share.

Mr. Bawaney.—We didn't agree to that, because Mr. Adamjee wanted to see this industry established here and under his own control.

President.—Then what happened?

Mr. Bawaney.—Mr. Littorin when going said "Mr. Adamjee, you are letting a golden opportunity slip by and you will remember me later on and you will be sorry."

Mr. Mathias.—Have you had any reason to feel sorry for refusing the offer?

Mr. Bawaney.—Not up till now, but then there is the future to consider. We do not know what will happen then. We find from the prospectus of their Company that their capital is Rs. 16 crores and they have got a reserve fund of Rs. 8 crores and they are making a profit of Rs. 2 crores a year. They can get much financial assistance at a very low rate of interest. It would not matter anything to them to lose Rs. 5 to Rs. 10 lakhs in the business in India out of their profit of Rs. 2 crores.

President.—Did anything else happen between you and them?

Suits filed against the Company re labels.

Mr. Bawaney.—They filed 11 suits against us without giving us any notice in connection with labels. For each label they filed 3 cases. In the police court they filed one criminal case and in the High Court they filed one injunction suit and a civil suit.

President.—But you lost one of the cases.

Mr. Bawaney.—It has now gone on appeal.

Mr. Mathias.—They are all expensive cases.

Mr. Bawaney.—Yes. We have spent about Rs. 70,000 on that one case on the original side and not on the appellate side. One suit alone took three months.

Dr. Matthai.—How long did the whole litigation take?

Mr. Bawaney.—One suit on the civil side took three months.

Dr. Matthai.—That was on the original side.

Mr. Bawaney.—Yes.

Dr. Matthai.—There was also a police case.

Mr. Bawaney.—Yes three police cases. They also got tired and withdrew all the other cases. We settled the other suits on our terms. Each suit whichever party lost it would go on appeal. The matter would go up to the

Privy Council. That would take Rs. 1½ to Rs. 2 lakhs. If there were 10 suits you could calculate how much it would cost.

Dr. Matthai.—How much have you spent so far?

Mr. Bawaney.—Rs. 70,000.

Mr. Mathias.—Does that suggest they wished to interfere with your business? It seems to me that—having these enormous resources you say they have—if they really wished to smash your business, they would go on with the 12 cases.

Mr. Bawaney.—They took a very wise step in what they did. They thought instead of wasting Rs. 20 lakhs in the courts they would spend it in the business to harass us.

Dr. Matthai.—When did this litigation start?

Mr. Bawaney.—25th November, 1925. These cases were very peculiar. One case was in connection with a label which was not even their own label. It was a Japanese label. They filed suits and alleged in their plaint that millions of boxes were imported by them.

President.—We don't want to go into these cases in detail. Your contention is that they filed suits against you in order to harass you.

Mr. Bawaney.—Yes.

President.—They subsequently withdrew some of the cases?

Mr. Bawaney.—Yes.

Dr. Matthai.—There is no outstanding litigation.

Mr. Bawaney.—No, except the matter on appeal.

Price cutting.

President.—Now in regard to this competition to push you out, I don't think you have said how they began to reduce the prices both of the imported Swedish matches as well as of their Indian matches. Now they sell at Rs. 2-10-0.

Mr. Bawaney.—Before March, 1925, only one brand of Swedish matches (elephant brand) used to be imported. Mostly foreign matches used to come from Japan.

President.—What about their own matches? Have they been cutting the prices?

Mr. Bawaney.—Yes, but not to any considerable extent in Burma. In India their Calcutta factory has taken a leading part in reducing the rates. They are cutting the rates day by day and the Bombay factory has also taken a leading part in this direction. When you take evidence in those localities you would be able to get all the particulars.

Mr. Mathias.—Have you any reason to suggest why, if they have adopted the policy of price cutting in India, they have not similarly followed the same policy in Burma?

Mr. Bawaney.—In Burma, even now, they are able to meet 40 per cent. of Burma's requirements by selling the Swedish matches. They are also selling their locally made matches in small quantities.

Mr. Mathias.—Do you suggest that if they reduced their prices in Burma, they would not be able to affect your sales very much but would reduce the sales of imported Swedish matches?

Mr. Bawaney.—Yes.

Anti-trust legislation.

President.—You have given evidence on these two points, viz., the existence of a trust in India and that it is operating to a certain extent in competition against Indian concerns. As regards the third point, supposing we are satisfied for the sake of argument that that was so, what about the remedy?

Mr. Bowney.—This is not a matter in which I can give an opinion off-hand. It requires deep consideration. I cannot say anything just now. But I can say this much that if they get any loophole they will certainly hide themselves behind the law. They will do all they can to get a footing in the country.

President.—Do you know of any country where they have two different scales of duty, one for foreign capitalists and one for local capitalists?

Mr. Bawaney.—This is not a mere question of foreign trader as against Indian trader but a question of trust which tries to crush the other competitors in the field in order that it may put up its price later.

President.—Whether the capital is Indian or British, if it acts as a trust whose object is eventually to get a monopoly and to raise the price of a domestic article, then you contend that every Government has the right to interfere.

Mr. Bawaney.—Yes.

Mr. Mathias.—Your suggestion is anti-trust legislation.

Mr. Bawaney.—Yes.

Mr. Mathias.—If there is to be an anti-trust legislation, I take it that you will not press the point regarding discriminating excise.

Mr. Bawaney.—We will not press it.

Mr. Mathias.—Do you consider that small cottage industries which can be started where the supply of wood is limited, constitute some protection against an attempt by the trust to corner the match market?

Mr. Bawaney.—It is a very good thing if small cottage industries can be started but I am afraid that the trust would sell its matches at such a low rate that people who would do this as a cottage industry would not be able to compete.

Mr. Mathias.—The cottage industry is very easily started.

Mr. Bawaney.—Yes.

Mr. Mathias.—The cottage industry does not require much in the way of a plant.

Mr. Bawaney.—No.

Mr. Mathias.—It can be started in places where the supply of match wood is comparatively limited and where no big factory can be started.

Mr. Bawaney.—Yes.

Mr. Mathias.—Supposing this Trust has got control over the Indian market and forced up the price to something very high, would not the natural consequence be that a number of cottage industries would be started which would be able to undersell matches produced by the trust.

Mr. Bawaney.—When once the industry is dead, it takes a long time to revive it.

Mr. Mathias.—My point is this. The price which a monopoly can charge for its product is limited by the fear of competition.

Mr. Bawaney.—Yes.

Mr. Mathias.—Therefore if a number of cottage industries can be started, it would naturally limit the price which a monopoly would ask for its matches in India.

Mr. Bawaney.—What is the guarantee that matches manufactured by the cottage industries will be able to supply the market against these people? What is the guarantee that the cottage industries themselves would not be crushed? If anybody started a cottage industry in one place; the Trust people will begin to undersell him at that place.

Mr. Mathias.—My point is slightly different. A well managed monopoly will always sell at a price which is sufficiently remunerative and will not arouse excessive competition and thereby limit its sales.

Mr. Bawaney.—Because the Swedish Trust has obtained a monopoly at Peru, a match box containing 40 sticks is sold as high as two annas there.

Mr. Mathias.—The possibility of a competitor in the form of cottage industries would limit the price which the Swedish Trust would demand. To that extent, the cottage industry might be considered a good thing.

Mr. Bawaney.—The cottage industries cannot progress when they have to compete with the Trust. Supposing they are started, the Trust people would sell their matches at such a low price that they would be crushed.

Mr. Mathias.—I want your opinion whether it would be worth while encouraging the establishment of cottage industries as a means of limiting the operation of any possible trust.

Mr. Bawaney.—Yes, it would be to a certain extent.

The Swedish Match Company in Japan.

President.—You have got representatives in Japan.

Mr. Bawaney.—Yes.

President.—Have you any information to give us as to what the Swedish Company is doing in Japan?

Mr. Bawaney.—Yes.

President.—What is your information?

Mr. Bawaney.—This is the latest information we have about the Swedish Trust from Japan. This letter is dated 1st March, 1927, and is from our business friend in Japan.

“We have received to-day a cable from our Bombay friends stating that the New Duty question is finally decided to-day and remains unchanged. This will mean the Match Factories in India will have the identical year as that of last year, regarding the Duty question.

“We understand that the Swedish Match Co. (Wimco) people are dumping the matches into your market at a ridiculously cheap rate, which of course is intended to stamp out the manufacturing of matches in your market. These people are very independent and they try to ruin the market of every place in India. They have factories in Calcutta and Bombay, and they are competing desperately in these markets also.

“We hear that they intend to have a factory in Rangoon and Madras, and it may be perhaps they are now trying to dump the goods in your market with the intention to aim for a purchase of some factory at your district, who may become tired of making further matches.

“This kind of motive they always use when they aim for their want. They have come to Japan and have amalgamated in shares with three large people of match makers, and to-day our Japanese people are losing more money than what they were doing alone. They probably wish to govern the whole world in match field. Our Japanese people are now worried why they have not sold everything to the Swedish concern, instead of reserving half share in business. This for your information.”

President.—These people have got a half share in the Japanese business.

Mr. Bawaney.—Yes.

President.—Now the Japanese partners find that they are losing money?

Mr. Bawaney.—They are sorry why they did not sell away their other half share also.

President.—They have formed a combine for the purchase of raw materials?

Mr. Bawaney.—Yes. Those that have not joined the trust have formed themselves into an association and combined themselves to buy raw materials, in one lot which they divide amongst themselves afterwards.

Mr. Mathias.—Is it a combine of the cottage industries?

Mr. Bawaney.—Yes. There were six factories of which three of the biggest have amalgamated with the Swedish Trust. These people are sorry now that they have amalgamated with the Trust.

Dr. Matthai.—What exactly is the position in Japan? The Trust has combined with three large factories and there are other large factories which have formed an association of their own.

Mr. Bawaney.—Yes, and the small factories also.

Dr. Matthai.—Therefore there are two associations in Japan. Are they working on some understanding?

Mr. Bawaney.—They are still fighting. The association which is outside the trust combines to buy chemicals, etc., in one lot.

Mr. Mathias.—It is some sort of co-operative society.

Mr. Bawaney.—Yes.

Dr. Matthai.—I thought that there was some understanding between the two associations with regard to the distribution of markets.

In Germany.

Mr. Bawaney.—I have not heard about that. The Swedish Trust has got about 70 per cent. shares in Germany.

President.—What is your source of information?

Mr. Bawaney.—One of my German friends has written to me on this subject. He says "Since 1920, the Svenska has taken interest in the German match industry by gradually buying shares of the leading factories. At the present day they have 65 per cent. of the total production. It must be however understood that all the employees are Germans and one cannot speak of a monopoly."

Mr. Mathias.—That is to say they have got 60 or 70 per cent. of the share capital in Germany?

In Poland.

Mr. Bawaney.—Yes. This is the American branch of the Swedish International Match Corporation. Then about Poland the position is as follows:—"The Internal Match Corporation (American branch of the Svenska) has got the right to manufacture and sell matches in Poland from 1st October 1925. This agreement is running for 20 years. In return the I. M. C. is granting Poland a loan of 6 million dollars bearing 7 per cent. interest, redeemable within 20 years. The I. M. C. is paying a yearly monopoly rent of 5 million Goldzloty (about £125,000). On the other hand the Government is getting 12 per cent. of the nett profits of the monopoly. It is however very interesting to note that the then Minister President Grabaki is now accused of concluding the above agreement against the law and Poland is suffering enormous losses and proceedings will be taken against him."

In France.

Dr. Matthai.—What about France?

Mr. Bawaney.—They are just now negotiating with France. Then the position in Peru is as follows:—

In Peru.

"There the Trust has concluded an agreement for 20 years from 1st February, 1926. The existing match factories have been closed down and the whole requirements are imported from Sweden. The price of one match box containing about 40 matches is now 2 annas. The yearly monopoly rent is 3.6 million Swedish kronen. The nett profit for the Trust is estimated at about 1.5 million Swedish kronen per year."

In Greece.

Then about Greece—

"An agreement has been concluded for 28 years. The Trust is granting the Greece Government a loan of one million pound sterling at 8½ per cent. interest redeemable within 28 years."

In Chili.

Mr. Mathias.—Have you any information about Chili?

Mr. Bawaney.—Not at present but I think I can get it. I think they have also got monopoly in Egypt. There is another rival match factory at Chili too I think.

In America.

Mr. Mathias.—And in America?

Mr. Bawaney.—In America probably they are alone.

System of Excise.

President.—I want to ask you about this excise. We have got the excise system here in some cases. When is there a Government monopoly? In this case supposing there was no question of Government monopoly but an excise duty was levied, how do you suggest it should be done? In some parts of Europe and other places they put on labels; each match box or each unit in which the article is sold to the buyer bears a Government label as a sort of stamp. Do you think there would be any difficulty if it were done in that way? Supposing you were manufacturing matches, you manufacture one million gross a year, and you go to Government and buy one million labels and on every match box you put these labels and no match box which does not bear this label is allowed to be sold, would there be any difficulty?

Mr. Bawaney.—In that case we will make more than 700,000 boxes every day and to put labels on 700,000 boxes will be an expensive job.

President.—Otherwise you will have to put them in bond?

Mr. Bawaney.—The proposal will require more serious consideration; I am afraid I cannot give my opinion offhand.

President.—I am suggesting to you whether it would not be the easier way. Any man who has got a match factory comes to the post office or some other office and buys these labels and any match box which is sold in the bazar without this label showing that the duty has been paid will be confiscated, in addition to other penalties which may present that would be a possible method, would it not?

Mr. Bawaney.—If we cannot hit upon any better or easier method we can adopt this one.

Dr. Matthai.—You can have a stamping machine. You can buy the stamps as you buy labels and then put them into the machine which does the sticking. This can be done along with the match labels.

President.—That method appears to be the simplest for the manufacturer as well as the consumer. People have simply to go and inspect the places where matches are sold and can prosecute persons who are selling matches without stamps. Otherwise you must have inspectors, you must have proper accounts and when boxes are made outside it is very difficult to keep a check.

Mr. Bawaney.—At present it appears an easy matter but there may be trouble in working it. If we can think out of any other method we will let you know.

President.—In the woven textiles they do not have an excise duty because it is very difficult, but here in this industry if you exempt all cottage match industries, then a very large percentage of matches will be produced in these small factories and it will be a serious problem.

Dr. Matthai.—Do you think it would be difficult for the small factories to send in their returns of manufacture to the Collector of Customs or the Director of Industries or whoever it might be?

Mr. Bawaney.—They will be illiterate most of them.

Dr. Matthai.—And it will always be impossible for a responsible officer to check them?

Mr. Bawaney.—That is so.

Dr. Matthai.—But it will be possible if he fixes a stamp?

Mr. Bawaney.—Yes, that can be done, but the costs will be increased.

Dr. Matthai.—They may be gummed just as labels are.

THE MUSLIM MATCH FACTORY.

**Evidence of Mr. B. BANERJEE, M.Sc., Expert and Works-Manager,
recorded at Rangoon on Wednesday, the 23rd March 1927.**

Introductory.

- President.*—Are you appearing for the Muslim Match Factory?
Mr. Banerjee.—Yes.
President.—In what capacity do you appear?
Mr. Banerjee.—I am the Works-Manager.
President.—Are you in possession of all the information?
Mr. Banerjee.—Yes. All the works are done under my supervision.
President.—Who is the proprietor of the Muslim Match Factory?
Mr. Banerjee.—Mr. M. C. Abowath is the Proprietor of the factory.
President.—Does he know much of the business?
President.—Have you had any special training in the manufacture of
 factory I am in charge.
President.—Are you also in charge of sales?
Mr. Banerjee.—No, I am not in charge.
President.—That is rather unsatisfactory.
Mr. Banerjee.—But I can give you all information.
President.—Who is in charge of sales?
Mr. Banerjee.—Mr. Abowath himself.
President.—Have you had any special training in the manufacture of
 matches?
Mr. Banerjee.—I am in the match business for the last three years. I was
 chief chemist and Works-Manager of Mahlwagon Match Factory which had
 been bought by the Rangoon Match Works.
President.—Where did you learn?
Mr. Banerjee.—I am an industrial chemist.
President.—Where were you trained?
Mr. Banerjee.—In the Calcutta University.
President.—Have you had any special training?
Mr. Banerjee.—Practical work in Mahlwagon Match Factory.
President.—You learnt it here then?
Mr. Banerjee.—I was in various factories for a long time. I was in Quetta
 before.
President.—Is there a match factory in Quetta?
Mr. Banerjee.—There was a factory for the extraction of essential oils
 there. I was also in the Indo-Burma Petroleum Works. Afterwards I was
 the Manager in the Rangoon Soap Works, Kamayut.
President.—In Calcutta you did not work in any Match Factory?
Mr. Banerjee.—No.
President.—Then, you say that the factory was started in 1925.
Mr. Banerjee.—The factory was started before 1925 but it was bought by
 Mr. M. C. Abowath in 1925.
President.—But in a later paragraph in answer to question No. 58, you say
 that the machinery was bought originally by the Illichpur Match Factory.

Mr. Banerjee.—I was informed that this machinery was bought by the Illichpur Match Factory in India. Somehow or other that factory failed and the machinery came to Burma. Afterwards, it came into the possession of Mr. V. M. Ghanni who started this factory first in 1924, and finally it came into the hands of Mr. M. C. Abowath in December, 1925.

Dr. Matthai.—How old is the machinery now?

Mr. Banerjee.—About 15 years. The date is given in Mr. Troup's book.

Mr. Mathias.—It is only a dipping machinery, or have you got a peeling machinery also?

Mr. Banerjee.—Everything, peeling, box-making, frame-filling, etc.

Dr. Matthai.—Is it a complete set of machinery?

Mr. Banerjee.—The drying machineries are damaged; whereas the other machines are complete and in good condition.

President.—Your factory does not work on Fridays.

Mr. Banerjee.—No.

President.—Your labour is not Muhammadan, is it?

Mr. Banerjee.—Some labourers are Muhammadans and the factory was being closed on Fridays from the beginning being a special prayer day for the Muhammadans.

President.—Do you work on Sundays?

Mr. Banerjee.—Yes.

President.—Instead of closing the factory on Sunday, you close it on Friday.

Mr. Banerjee.—Yes.

Output.

President.—You have been manufacturing matches only for about a year.

Mr. Banerjee.—Yes, in this factory.

President.—Your output was very small last year.

Mr. Banerjee.—Yes.

President.—Your output was about 57,000 gross of boxes.

Mr. Banerjee.—That is right.

Dr. Matthai.—That comes to about 200 gross a day.

Mr. Banerjee.—Yes. Now the outturn has increased to 50 tins daily, each tin containing 1,200 boxes.

Dr. Matthai.—That is about 400 gross a day.

Mr. Banerjee.—Yes.

Dr. Matthai.—Your full capacity is about 800 gross of boxes a day.

Mr. Banerjee.—About 100 tins of matches, each containing 1,200 boxes per day of 10 hours.

Dr. Matthai.—That comes to about 800 gross a day.

Mr. Banerjee.—Yes.

Dr. Matthai.—How many days do you work in a year?

Mr. Banerjee.—26 days per month.

President.—Have you no holidays?

Mr. Banerjee.—We have a few holidays.

President.—300 days would be about correct.

Mr. Banerjee.—Yes.

Mr. Mathias.—Are you situated on a river bank?

Mr. Banerjee.—No. The factory is two miles off from the railway siding and 3 miles off from the river.

Timber supply.

Mr. Mathias.—Do you get your wood by train and then cart it?

Mr. Banerjee.—We get it by train and then cut it to the necessary size at a place near the railway station and then we take it by lorry to the factory.

President.—Do you cut it by hand there?

Mr. Banerjee.—Yes.

President.—Where do you get your wood from?

Mr. Banerjee.—We get it from different places of Burma.

President.—All your supplies come by rail?

Mr. Banerjee.—Yes.

President.—Do you get your wood from the traders?

Mr. Banerjee.—Yes.

President.—Have you a tank in your factory?

Mr. Banerjee.—No.

President.—You have got no tank for submerging your wood?

Mr. Banerjee.—No.

Mr. Mathias.—So that you cannot keep it for any length of time.

Mr. Banerjee.—No. We generally try to get fresh stock. We cannot keep any stock because it will dry up and crack.

Mr. Mathias.—Your factory is rather unsuitably situated.

Mr. Banerjee.—We find difficulty, it is true.

Dr. Matthai.—At a time how much wood do you buy?

Mr. Banerjee.—We want about 75 tons a month. We give contracts for 50 tons.

Dr. Matthai.—How much on an average do you have in stock?

Mr. Banerjee.—About 30 tons.

Dr. Matthai.—Where do you keep it?

Mr. Banerjee.—Near the Railway Station and at the Factory.

Varieties of wood.

President.—How many classes of wood do you use? You have mentioned Sawbya, Maulettanshe, Didu and Letpan.

Mr. Banerjee.—We use four kinds of wood.

President.—Sawbya and Maulettanshe you use for splints.

Mr. Banerjee.—Yes.

President.—Do you use them also for box veneers?

Mr. Banerjee.—Sawbya we use often for inside boxes and for the bottom but not for the outside.

President.—What do you do for the outside box?

Mr. Banerjee.—We use Letpan and Didu.

President.—Is there any difference in the price of wood?

Mr. Banerjee.—Yes. Sawbya and Maulettanshe are selling at Rs. 35 a ton delivered at the station.

President.—How much does it cost to take it to the factory from there?

Mr. Banerjee.—About Rs. 2 more.

President.—What is the price of the other two varieties?

Mr. Banerjee.—About Rs. 30 a ton. Sometimes the price will go up. I have given the price here as Rs. 35 to Rs. 41. For instance we have to pay more for pine.

President.—Do you use pine also?

Mr. Banerjee.—We formerly used it and we intend using it in future. The difficulty about pine is that it cannot be used for box veneers on the

German machine. It has to be boiled for a long time before it can be used for box veneers on the German machine. But in the case of the Japanese machine, the veneer comes out at first and then the pieces of veneer are put into the grooving machine and they are grooved. In such a way boiling is not necessary.

President.—Is it one process?

Mr. Banerjee.—In the German machine, it is one process; whereas in the case of the Japanese machine, grooving is done separately.

Mr. Mathias.—What is the exact difficulty in using the pine on the German machine?

Mr. Banerjee.—The difficulty is that the grooves are not made properly. In the case of the German machine, the knives are in the horizontal position and in the Japanese machine, they are at an angle of about 45° with the horizontal plane. In the former case, the knife heads get clogged.

Mr. Mathias.—Do the knots in the pine wood make any difference?

Mr. Banerjee.—No difference.

Mr. Mathias.—The difficulty that you feel in regard to the pine wood in the making of veneers, does that difficulty arise in the case of Japanese pine wood? Have you any knowledge of that wood?

Mr. Banerjee.—When I was in the other factory, I used the Japanese pine wood. It is not so hard grained. Further there is no difficulty in the case of the Japanese machine. The difficulty comes in only in the case of the German machine.

Mr. Mathias.—In the case of the Japanese machinery, there are two processes.

Mr. Banerjee.—Yes.

Mr. Mathias.—And the processes are separate.

Mr. Banerjee.—Yes.

Dr. Matthai.—Have you used Letpan at all for making splints?

Mr. Banerjee.—I have tried it. The splints become reddish after a time.

Dr. Matthai.—What about Didu?

Mr. Banerjee.—We have not found it suitable. There is another difficulty with regard to these two varieties. They do not absorb paraffin properly. The head composition too does not stick so consistently as in the other kinds.

Mr. Mathias.—Are your matches damp-proof?

Mr. Banerjee.—They are sufficiently damp proof.

Mr. Mathias.—The top splints might be a little difficult to strike but those which are a little lower down in the box might strike easily.

Mr. Banerjee.—All of them strike easily.

President.—How many brands have you got?

Mr. Banerjee.—6.

Dr. Matthai.—How many sizes do you make?

Mr. Banerjee.—Only one size.

Dr. Matthai.—Is it full size?

Mr. Banerjee.—Yes.

Dr. Matthai.—How many splints are there in a box?

Mr. Banerjee.—80 to 85.

Process of manufacture.

President.—Have you got any box-making machine?

Mr. Banerjee.—These (samples) are all hand made. But we have box-making machines.

President.—How much do you do by hand how much is done by the machine?

Mr. Banerjee.—We do mostly by hand. The box-making machines have been fitted recently and the work is under trial.

President.—Is the dipping also done by hand?

Mr. Banerjee.—Yes.

Mr. Mathias.—Are these matches soaked in paraffin?

Mr. Banerjee.—Yes.

President.—Do you follow the same system as they do in the Rangoon Match Works? They make the splints and the veneers by machine and everything else is done by hand.

Mr. Banerjee.—Yes.

President.—You have not given us any costs at all.

Mr. Banerjee.—I have got them with me now (hands in a list).

Dr. Matthai.—You have left a blank against Swedish matches?

Mr. Banerjee.—It is Rs. 21-12-0.

President.—How much is that per gross?

Mr. Banerji.—A little less than Rs. 2-10-0.

President.—You are selling yours at Rs. 1-6-0.

Mr. Banerjee.—Yes.

Mr. Mathias.—When you complain in answer to question 21 that “suppliers have to wait long owing to delay of the forest officers to pass the timber and then again for want of wagon supply the timbers are delayed on the way and owing to these reasons the timbers are often dried up, and they crack and become useless,” what I understand from what you say is that this is mainly due to the disadvantageous situation of the factory?

Mr. Banerjee.—Not that. We do not cut the trees but place orders with the suppliers who cut them and bring them down to the nearest station.

Mr. Mathias.—You have to bring them down to the railway station and then you have to carry them from the station to the factory and you have no place to stock them?

Mr. Banerjee.—We have place to stock them but as the Factory is away from river we cannot keep in tank with regular water supply. We can keep stock as it is without much damage for 15 days.

Mr. Mathias.—You are living from hand to mouth if you have only 10 to 15 days' supply? If you were more advantageously situated you would not have so much trouble.

Mr. Banerjee.—That is true. What the contractors inform us is that they find difficulty in getting the timber passed by the forest people.

Costs.

President.—What is your total cost per 100 gross?

Mr. Banerjee.—Rs. 10-10-0 for 8½ gross.

President.—That is Rs. 1-4-3 per gross. That includes all your costs?

Mr. Banerjee.—Yes.

President.—Does that include depreciation and interest on working capital that you had to borrow?

Mr. Banerjee.—No.

President.—Does it include office charges?

Mr. Banerjee.—Yes.

President.—Does it include any profits?

Mr. Banerjee.—No.

President.—Have you got the figures under separate headings?

Mr. Banerjee.—Yes. They are as follows:—

	Rs.	A.	P.	
Timber	1	12	0	
Chemicals and paraffin	2	0	0	
Outside and inside wrapping paper	0	8	0	
Packing paper	0	3	0	
Small label	0	3	0	
Big label	0	0	9	
Flour	0	0	6	
Zinc sheet	0	12	0	
Box-making labour	1	4	0	
Box-filling labour	0	10	0	
Side painting	0	1	6	
Packeting	0	1	6	
Soldering	0	1	5	
Salared labour	3	0	0	
Depreciation and interest on capital should be added to this, say		0	6	0
TOTAL	11	0	0	

Mr. Mathias.—That is per tin of 8½ gross?

Mr. Banerjee.—Yes. I may mention that I made some experiment with Kamayut timber. It was very fresh and the cost for one tin of splints came to Re. 1. I mention this only to show that in case fresh timber is available there is not so much wastage.

President.—You have told us that you can reduce costs still further? How will you do it?

Mr. Banerjee.—If the splint and box veneer making industry is transferred to the forests.

President.—That is rather a different idea. I thought in your own factory you could do it.

Mr. Banerjee.—I don't think I can do that in my own factory.

President.—If you got sufficient stock?

Mr. Banerjee.—With fresh stock only economy can be effected. It can be effected by dividing the establishment also.

Dr. Matthai.—But by dividing your establishment and so on you increase your charges?

Mr. Banerjee.—But there will be saving in the freight and in other directions, and wastage will be less.

President.—I do not see that this is of much advantage. What I want to know is whether in your own factory you can suggest anything by which the costs can come down.

Mr. Banerjee.—I am afraid no reduction is possible in our factory because it is far away from the station siding and from the river and we have not got a suitable tank to keep timber in good condition.

President.—Why was it started at Kamayut?

Mr. Banerjee.—I can't say; that was not done in my time. The reason so far as I am aware was that Messrs. Memon Industrial Company who originally bought the machinery is Managing Agent of a soap factory there and when they bought the machinery they had not sufficient capital at their disposal to start a match factory at a better place so they fitted the factory thereby the side of soap factory.

President.—Is Mr. Abowath interested in the soap factory?

Mr. Banerjee.—No.

President.—Your costs appear to be lower than any we have so far examined,

Mr. Banerjee.—Because our establishment charges are low. The manufacture is managed by me entirely with the help of labourers.

President.—Are these costs otherwise accurate?

Mr. Banerjee.—Yes.

President.—Are these costs taken from your books?

Mr. Banerjee.—Yes.

President.—How do you keep your costs?

Mr. Banerjee.—I have got a process book in which I write down the formulas and how much of each is used and then after the end of the month I find out the values of the materials used and from that I make a general calculation and arrive at the cost of matches. I don't do it every time.

President.—As regards timber I suppose you have got to do that?

Mr. Banerjee.—We are buying at the same price. It will be roughly from Rs. 35 to Rs. 41.

President.—How much timber do you take for your gross of matches?

Mr. Banerjee.— $(\frac{3}{10})$ 3 c. ft. per gross of matches.

Mr. Mathias.—You have not included in this case the cost of power and lubricating oil?

Mr. Banerjee.—Everything is included. That will come under that Rs. 3 for the salaried staff. I should like to state that Rs. 350 is to be spent for fuel per month.

Dr. Matthai.—Your power comes to Rs. 350 a month?

Mr. Banerjee.—Roughly.

Dr. Matthai.—What is your fuel?

Mr. Banerjee.—Small pieces of teak and saw dust.

Dr. Matthai.—What price do you get it at?

Mr. Banerjee.—Saw dust Rs. 26 per 100 bags 48" x 32".

President.—You say you do box filling by contract?

Mr. Banerjee.—Box-filling, side-painting and packeting by contract. Women do these. Box-making and labelling is done by women at Re. 1 per 1,000.

Dr. Matthai.—Going back to the question of power, you spend Rs. 350 a month on fuel and your daily production is 50 tins. How much is your monthly production?

Mr. Banerjee.—About 1,300 tins. We are burning the waste timber also; that is from our own factory.

President.—You do not require any power at all. That one engine is doing the whole thing.

Mr. Banerjee.—That is so, but I find some difficulty because it is not powerful enough.

President.—What have you got?

Mr. Banerjee.—A small German portable engine, combined with boiler.

President.—You said you get Rs. 1-6-6 per gross of matches so that you have got a margin of 0-1-3?

Mr. Banerjee.—Re. 1-5-3 is the cost, there is a margin of 0-1-3 per gross.

President.—You say you are satisfied with that. You do not want any further increase in the duty?

Mr. Banerjee.—What is already there is enough, I think.

Mr. Mathias.—Your capital you state to be Rs. 1,50,000?

Mr. Banerjee.—I understand that the valuation of the factory was Rs. 1,00,000 and the present working capital required Rs. 70,000 (seventy thousand).

Mr. Mathias.—The machinery is about 15 years old, Rs. 1,00,000 is a high valuation.

Mr. Banerjee.—We bought the factory at that price. In case of buying new machinery the valuation will be far higher.

Mr. Mathias.—Rs. 70,000 is a large sum for working capital, because you say you have no stock of timber.

Mr. Banerjee.—From the beginning we were working at a loss. The output was 500 to 600 tins a month, sometimes less even. Then after I joined this factory the outturn gradually rose up and now it has come to the present position.

Mr. Mathias.—Why should you want seventy thousand for working capital because you have not got to keep any stock of either timber or finished matches?

Mr. Banerjee.—We shall have to sell matches on credit. We cannot sell them for cash. We have got trouble in that especially owing to the practice of the Swedish manufacturers and Messrs. Adamjee Hajee Dawood Company who give credit for an unknown time. We don't know how long they give credit. We hear they give 3 to 8 months' credit.

Mr. Mathias.—The match manufacturers do not seem to be a happy family.

Mr. Banerjee.—They are not.

Mr. Mathias.—Can you give me any idea as to how long it would take to collect the money?

Mr. Banerjee.—Two to three months.

Mr. Mathias.—As regards the working capital, three months output will be a fair amount.

Mr. Banerjee.—The output is about 1,300 tins. At Rs. 11, it comes to Rs. 14,300. Then there are chemicals, etc. It will come to about Rs. 70,000 and in this Rs. 70,000 some new machinery is included. Rs. 1,00,000 is the original valuation of the factory.

Mr. Mathias.—Who made the valuation?

Mr. Banerjee.—Messrs. Memon Industrial Company.

President.—It was worth a lakh of rupees in 1910.

Mr. Banerjee.—In 1925 it came into the hands of Mr. Abowath and he bought at Rs. one Lakh.

President.—Did Mr. Abowath pay Rs. 1,00,000?

Mr. Banerjee.—Yes.

Mr. Mathias.—You cannot produce any document as to what price was paid for the machinery.

Mr. Banerjee.—Document may be produced if required.

Mr. Mathias.—Have you got any document?

Mr. Banerjee.—Yes.

President.—This valuation is not of much use to us at present.

Mr. Banerjee.—That is the price at which Mr. Abowath bought.

President.—You have made a good proposal in answer to question 45. You say there "The demand may increase if the Government encourage the people in the direction of smoking cigars." What do you wish we should suggest in order that cigar-smoking may be encouraged?

Mr. Banerjee.—Personally I am against cigars altogether. I don't find any other way to increase the sale. Every hearth and home now-a-days is using matches. Twenty-five years before we knew that sticks were dipped in sulphur and they were burning by keeping the fire in the night. That process has already disappeared.

Dr. Matthai.—Look at your answer to question 15. You say: "Each case requires about 2.26 c. ft. of timber."

Mr. Banerjee.—Yes.

Dr. Matthai.—The figure that we got from Messrs. Adamjee Hajee Dawood and Company is 5 cubic ft.

- Mr. Banerjee.*—What we have given you is the actual measurement.
- Dr. Matthai.*—You really have had no experience of making.
- Mr. Banerjee.*—I have measured it myself.
- Dr. Matthai.*—You don't export.
- Mr. Banerjee.*—We do export to Madras.
- Dr. Matthai.*—You make your own packing cases out of rejected wood.
- Mr. Banerjee.*—No.
- Dr. Matthai.*—You buy wood separately for that?
- Mr. Banerjee.*—Yes and sometimes old Japanese or Swedish cases we buy.
- Dr. Matthai.*—In answer to question 18 you say some people pay a royalty of Rs. 12-8-0.
- Mr. Banerjee.*—That is the information we have got.
- Dr. Matthai.*—Are you referring to Messrs. Adamjee Hajee Dawood and Company?

Match wood supplies.

Mr. Banerjee.—Yes. As regards royalty we have some suggestion to make. My suggestion is not to allow the use of match timber for any other purpose except for match manufacture.

Dr. Matthai.—For what other purpose is it used?

Mr. Banerjee.—It is used for house-building.

Dr. Matthai.—What kind of wood?

Mr. Banerjee.—Letpan and Didu.

Dr. Matthai.—Do they use Sawbya and Maulettanshe?

Mr. Banerjee.—Yes. Further Government help is required to see that the match wood is not used for any purpose other than match manufacture.

President.—At present there is no evidence that the match wood is used for any other purpose.

Mr. Banerjee.—I can give you evidence.

President.—Is it used for any other purpose?

Mr. Banerjee.—It is used in house-building particularly Letpan and Didu.

Mr. Mathias.—How do you propose to give effect to your proposal? You say that Government should not allow this wood to be used for any other purpose. Will you add a section to the Penal Code?

Mr. Banerjee.—That suggestion is explained in another place and that is Government should not grant to any party other than the match manufacturers and their *bonâ fide* suppliers license for match wood. In that way it can be done.

Mr. Mathias.—No contractor should extract this wood from the forest unless the contractor produces a letter of authority from a match manufacturer?

Mr. Banerjee.—The Government may fix the royalty to a reasonable figure.

Mr. Mathias.—Is this Rs. 12-8-0 reasonable?

Mr. Banerjee.—No, it is quite unreasonable. If Government call for tenders, we small manufacturers cannot stand in competition with Messrs. Adamjee Hajee Dawood and Company or the Swedish Trust.

Mr. Mathias.—What are the Government to do?

Mr. Banerjee.—They may fix the royalty and need not call for tenders.

Mr. Mathias.—Who is going to get a block of forest if there are three or four men competing?

President.—You would petition to Government that somebody else had been favoured, wouldn't you?

Mr. Banerjee.—By calling for tenders, small manufacturers do not have the chance. If the Government want to encourage the industry in the proper,

spirit, this will be the spirit shown by the Government, i.e., to allow the manufacturers or their *bona fide* suppliers to cut as much timber as they require and not to allow individual manufacturers any reserve as they have done at present.

Mr. Mathias.—If they have no reserve, it will mean that in a very short time all the match wood will be cut out and then you will all have to go farther and farther away.

Mr. Banerjee.—For that I have suggested plantation, but plantation will take time. As the wood is cut away, plantation must be taken in hand by Government. These are the suggestions that I have to make.

President.—On the ground that the industry is one of great national importance?

Dr. Matthai.—It is really for the sake of safeguarding small manufacturers like yourself that you make these proposals.

Mr. Banerjee.—There are not many big factories. For the sake of the big factories, small factories should not be troubled.

Mr. Mathias.—Why not? Will it benefit the public?

Mr. Banerjee.—We support so many hundred of labourers.

Mr. Mathias.—Would not the larger factories employ more men?

Mr. Banerjee.—They have got better equipment. They do mostly by machinery. We do mostly by hand. Our labourers get more profit than the big factory employees.

Mr. Mathias.—In the same way as hand weaving and hand spinning would employ more labour.

Mr. Banerjee.—They do, but it is not so much remunerative.

Mr. Mathias.—At present your small factories are not remunerative, I understand.

Mr. Banerjee.—They are remunerative but not much.

Mr. Mathias.—As you are already getting a very good return on your money, why should Government relinquish revenue in order to give the owners of small factories a still bigger return? On your own admission you are at present doing very well making quite a satisfactory profit.

Mr. Banerjee.—We are not getting good return. Government should do this considering it as a national industry.

Mr. Mathias.—On your own account the national industry is doing very well.

Mr. Banerjee.—I have told you a little while ago that the factory lost very heavily. Just now it has come to a position when it can earn a profit.

President.—All the industries take some time to learn their business. You have come to a stage when you can earn a profit. So you have no ground whatsoever to induce Government to relinquish any revenue.

Mr. Banerjee.—If they don't do that, we won't be able to compete with the foreign manufacturers.

President.—At present are you not competing satisfactorily?

Mr. Banerjee.—Yes. But if the royalty is Rs. 12-8-0, the price will gradually rise more and more.

Mr. Mathias.—The actual royalty forms a small part of the cost.

Mr. Banerjee.—Yes.

Mr. Mathias.—By far the greatest item in the cost of timber is the cost of transport.

Mr. Banerjee.—Yes.

Mr. Mathias.—So that really if Government instead of charging Rs. 4 or Rs. 5 charged Rs. 3 as royalty, it would make very little difference to your factory. Your contractors are selling you at Rs. 30 to Rs. 35. Adamjee's are competing. The average is about Rs. 4 or Rs. 5, Rs. 4 or Rs. 5 out of

Rs. 35 is a small amount. Even if you knock it out completely, it would make very little difference to your cost.

Mr. Banerjee.—If Rs. 4 is charged instead of Rs. 12-8 there will be much difference.

Dr. Matthai.—You were speaking of the employment that you would give to labour by maintaining a factory like yours. You pay As. 12 a day for men and women; I suggest your rate of wages is far too low. You are sweating your labour.

Mr. Banerjee.—There is a mistake there. The man gets Rs. 1-2-0 and the woman gets As. 12.

Dr. Matthai.—All the men are salaried labour.

Mr. Banerjee.—Yes.

Dr. Matthai.—And the woman are contract labour.

Mr. Banerjee.—Yes. Some highly trained women earn Re. 1-8-0 to Rs. 2 a day.

Dr. Matthai.—Do you deal with women and children direct?

Mr. Banerjee.—Yes.

Mr. Mathias.—May I just come back to this question of royalty. I didn't quite catch what you said. If Government were to reduce the royalty so as to enable you to get your wood at Rs. 30 instead of Rs. 35, that would be a handsome reduction.

Mr. Banerjee.—Yes, 14 per cent.

Mr. Mathias.—The reduction would not amount to more than half an anna per gross at the outside.

Mr. Banerjee.—That is something.

Mr. Mathias.—It is not a very large item.

Mr. Banerjee.—No.

Dr. Matthai.—Have you got a definite proposal in your factory for the appointment of an engineer?

Mr. Banerjee.—No.

President.—Between what hours, do you work your factory?

Mr. Banerjee.—From 6 A.M. to 11 A.M. and 1 P.M. to 6 P.M.

Dr. Matthai.—You have no information whether your factory is somewhat like a small factory in Bengal or not.

Mr. Banerjee.—No.

Works Costs.

President.—Are these costs 1926 costs?

Mr. Banerjee.—No, they are average costs.

President.—What is this ex-godown rate?

Mr. Banerjee.—That is what it costs us at the factory.

President.—Do you get all the imported materials direct?

Mr. Banerjee.—We buy from Japan and England.

President.—You don't buy them through local agents.

Mr. Banerjee.—No.

Dr. Matthai.—Do you get most of the materials from Japan?

Mr. Banerjee.—Not from Japan but from England. Sometimes we also buy from Japan.

Dr. Matthai.—Where do you get your amorphous phosphorus?

Mr. Banerjee.—We buy it from England.

Dr. Matthai.—Is it cheaper for you to get it from an English dealer?

Mr. Banerjee.—We know a big English dealer from whom we buy. We have not made any enquiries of any Swedish manufacturer.

THE RANGOON MATCH WORKS.

Evidence of Mr. D. G. BHAGWAT, recorded at Rangoon, on
Wednesday, the 23rd March 1927.

Introductory.

President.—Mr. Bhagwat, are you the General Manager of the Rangoon Match Works?

Mr. Bhagwat.—Yes.

President.—You are in charge of the works?

Mr. Bhagwat.—I am in charge of both sales and works.

President.—Who are the proprietors?

Mr. Bhagwat.—Messrs. M. H. Hirjee and Company.

President.—Are they local residents?

Mr. Bhagwat.—No, they are from Bombay.

President.—Don't they live here?

Mr. Bhagwat.—No. They were doing business with another firm in partnership here and they are doing their own business in Japan in export and import including matches.

President.—They import Japanese matches into the country?

Mr. Bhagwat.—They were exporting from Japan to other agents in Bombay and Rangoon.

President.—Do they do that still?

Mr. Bhagwat.—Yes, to a certain extent.

President.—Do they not find it rather difficult to combine the agency with their own business?

Mr. Bhagwat.—No.

President.—It is rather odd when you have got your own matches to push.

Mr. Bhagwat.—There are certain brands of Japanese matches that are desired by the people and they export those brands only. For example, there is a brand similar to our "Tiger" which is required by Akyab merchants. Practically there was very little export of these matches during the last six months; they exported about 100 cases only, that is all.

President.—To Burma?

Mr. Bhagwat.—Yes.

Mr. Mathias.—When you say the consumer desires a particular type do you refer to the actual consumers of matches or rather the retailers who for some reason or other consider it desirable to push the sales of certain types because it is possible they may get more commission?

Mr. Bhagwat.—I don't think so, because people who desire that particular brand have been buying from us these matches for a very long time, nearly six years.

Mr. Mathias.—But it depends more on the opinion of the retailer than of the consumer because the consumer has no expert knowledge, and will probably buy anything the retailer passes on to him?

Mr. Bhagwat.—He is accustomed to buy a particular brand for a long time, the "Tiger" for instance, and he is just satisfied with that particular brand that is all.

Dr. Matthai.—You make only two sizes of matches here?

Mr. Bhagwat.—Yes.

Dr. Matthai.—These two sizes that you make here are not imported from Japan?

Mr. Bhagwat.—No.

Dr. Matthai.—You sell a particular brand of a particular size, do you?

Mr. Bhagwat.—These Akyab people want half size matches with "Tiger" while we manufacture full and 5/8 sizes.

President.—How many different varieties of labels have you got?

Mr. Bhagwat.—About 13 to 14 varieties.

Mr. Mathias.—Every match works manufactures tiger brand safety matches, and I suppose that the products of different factories so labelled have approximately the same sale.

Mr. Bhagwat.—That is so.

Dr. Matthai.—Then you see for the Akyab people all that you have got to do is to import the labels?

Mr. Bhagwat.—Ours is not of the size that are imported.

Manager's Qualifications.

President.—What is your own experience of manufacture of matches?

Mr. Bhagwat.—I had studied up to the B.Sc. with Chemistry as my subject so I know something about general chemistry. Then I had entered a match factory in Karhad near Poona where I worked for one year; it was in 1915. It was however closed down about 10 months after my joining the factory because they could not get chemicals from the Continent. Then I left that place and went over to Japan and there I joined this Company and I used to visit some of the match merchants and later on came into closer contact with match manufacturers.

President.—Did you visit any factories?

Mr. Bhagwat.—Yes.

President.—Did you get any practical training?

Mr. Bhagwat.—No.

President.—Did you visit these factories frequently?

Mr. Bhagwat.—I visited many times and I got various data from these people there about manufacture.

Dr. Matthai.—How long were you in Japan?

Mr. Bhagwat.—From 1917 to 1922.

Match-making in Japan.

President.—Is manufacture in Japan carried on in large scale factories or in small factories?

Mr. Bhagwat.—There are large scale factories and small factories too, but even large scale factories do not produce their own boxes and splints in the factory itself. They get these from merchants dealing in boxes and splints.

President.—That is to say there is specialization there in splints?

Mr. Bhagwat.—Yes. One firm would deal with splints, another with box only and the third people would dip the splints in the chemical composition and then do side painting, packetting and that sort of thing.

President.—Do they sell the veneers for boxes or is it ready made boxes that they sell?

Mr. Bhagwat.—The firm dealing in boxes sell them ready made, but they themselves would make the veneers and distribute them to the workers at home to have boxes made by hand.

President.—Then they would supply them to the man who dips the splints?

Mr. Bhagwat.—Yes.

President.—So that it is divided into three main processes?

Mr. Bhagwat.—That is so.

President.—And they are carried on in different factories?

Mr. Bhagwat.—Yes.

Dr. Matthai.—Are you suggesting that this is the normal way in which production of matches is carried on in Japan?

Mr. Bhagwat.—Yes.

Dr. Matthai.—They do it in three different factories?

Mr. Bhagwat.—Yes.

Mr. Mathias.—Is dipping done by contract, that is to say after the splints have been made in one factory are they then handed over to the second factory for box making and then to the third factory for dipping at so much per gross?

Mr. Bhagwat.—No. The dipping man buys the splints from the splint maker and his boxes from the box maker.

President.—I suppose he is the final seller?

Mr. Bhagwat.—Yes.

President.—He confines his attention to the dipping only?

Mr. Bhagwat.—Yes, and also box filling, packeting and so on.

President.—As regards dipping, is it done by machinery or by hand?

Mr. Bhagwat.—In many places it is done by hand.

President.—In the same way as you do it with the hand machine?

Mr. Bhagwat.—Yes.

Dr. Matthai.—The only thing that is done by power driven machines is peeling and chopping?

Mr. Bhagwat.—Yes, sometimes they also do the frame filling, which is done in our factory by hand.

Dr. Matthai.—All the others are done either by hand or hand driven machinery. Am I right?

Mr. Bhagwat.—Yes.

President.—When you say they do the frame filling, do you mean they sell the splints in frames?

Mr. Bhagwat.—There are frames in which the splints drop from boxes. These splints are sold in bundles and these are broken open in the factory and thrown on the levelling machine which sets the splints in one line and then they are taken to the frame filling machine where the frames are filled with these splints. Then these frames are sent to the paraffin apparatus.

President.—They have not got power driven machines?

Mr. Bhagwat.—No.

President.—Not even in large factories?

Mr. Bhagwat.—No. In the big factory they produce about 20,000 cases per month of 50 gross each, that is 800 cases or 40,000 gross a day.

President.—Do they make the whole of it in that way?

Mr. Bhagwat.—Yes. Of course the process is multiplied many times in their factory. In our factory one apparatus is sufficient whereas in their factory they require perhaps 10.

President.—I see. They confine themselves only to one process instead of two or three processes and that is why they are able to produce a bigger outturn.

Mr. Mathias.—The brands of the Japanese matches which you import are the products of a cottage industry, aren't they?

Mr. Bhagwat.—That is so.

President.—I take it that the splints have to be fresh in this sense that if you keep them very long they would get dry?

Mr. Bhagwat.—What they do is this. Aspen wood splints are tied together with grass in bundles so that they do not get bent and then 400 such bundles are packed in one bale and sold in such bales.

President.—How long can you keep them before dipping?

Mr. Bhagwat.—It can be kept for a long time, even three or four years, they would not be spoilt or bent.

President.—But you cannot do that with Indian wood, can you?

Mr. Bhagwat.—No we can't. We have not tried as a matter of fact.

President.—The reason why I am asking you is this. My impression was that you could not manufacture all your splints, say, in the monsoon and keep them for the dry weather when it is difficult to get logs. My impression is that you cannot keep Indian splints for even five or six months.

Mr. Bhagwat.—One difficulty with *letpan* would be that after keeping them for three or four months some small insects make holes in them, but that does not happen with aspen.

President.—They get mouldy too?

Mr. Bhagwat.—Yes.

President.—What would happen if you used *sawbya* or *bonmeza*?

Mr. Bhagwat.—*Sawbya* we can keep perhaps.

President.—Supposing it was found that in certain parts of India there was no wood available in large quantities but the wood was available in Burma, would it be possible to manufacture the splints in Burma and export them to India as they do in Japan and dip them?

Mr. Bhagwat.—I think we can do that with *Sawbya* but of course it will cost a little more for keeping them in cases making them into bundles and so on.

President.—The cost would otherwise be reduced if you export them in splints instead of in logs.

Mr. Bhagwat.—That is so.

Dr. Matthai.—Does that apply also to *maulettanshe*?

Mr. Bhagwat.—We have tried *sawbya* and *maulettanshe*.

President.—Have you any experience of this?

Mr. Bhagwat.—Last year we kept these for about four months.

President.—Did you find any deterioration?

Mr. Bhagwat.—No.

President.—Were they all *sawbya* and *maulettanshe*?

Mr. Bhagwat.—Mostly *sawbya*.

President.—What about veneers for the boxes; will that keep?

Mr. Bhagwat.—Yes.

President.—Now, if the boxes were to be made separately, then it would be better to export the veneer for boxes because it will take less space than boxes. But veneer, after it has been peeled, will it keep to the same extent as splints or will it get brittle?

Mr. Bhagwat.—It will be brittle, but for making boxes by hand it will do, only we will have to wet it again. As a matter of fact we got some veneer from the Sunderbund Match Factory of Calcutta and we wetted these veneers again here and gave them to the women for making boxes and we got boxes made out of them. But the only trouble was that this wood was not quite so good as we get here.

President.—What wood was that?

Mr. Bhagwat.—*Genwa*.

President.—To come back to the manufacture in Japan, the man who dips performs the final process, does he?

Mr. Bhagwat.—Yes.

President.—Does he sell matches direct or does he do it through other firms dealing in matches?

Mr. Bhagwat.—He is considered to be the match manufacturer and he goes to the exporter and sells his stuff to him.

President.—Can you give me some idea as to how many of these factories are working in Japan in that way?

Mr. Bhagwat.—About 50 but formerly it was more than 120.

President.—In different parts of Japan?

Mr. Bhagwat.—Mostly they are round about Tokyo and Osaka.

President.—At the ports chiefly, are they?

Mr. Bhagwat.—Yes.

President.—They don't manufacture them in the interior.

Mr. Bhagwat.—Very little compared to the production in these two ports.

Dr. Matthai.—The Japanese industry gets most of its wood from outside.

Mr. Bhagwat.—They get it from Siberia, Vladivostock.

Dr. Matthai.—What exactly is the reason why a man chooses to specialise in splints? I can understand a man specialising in splints who happens to be near the source of wood supply.

Mr. Bhagwat.—In former days about 25 or 30 years ago there was wood supply near about in Japan and they might have started making the splints then. They have specialised in that particular department and they are continuing.

President.—That is to say Japanese have really evolved a method of mass production by dividing the processes.

Mr. Bhagwat.—Yes.

Mr. Mathias.—What is Japanese aspen, is that grown in Japan?

Mr. Bhagwat.—Yes.

Mr. Mathias.—Why do Japanese rely on Russian aspen?

Mr. Bhagwat.—Now-a-days much of it has been utilised for matches at these ports and now they have to go to Hokkaido to get it. I think there are fewer transport facilities between Hokkaido and these ports than between Siberia and Osaka.

Mr. Mathias.—The forest resources of aspen in Japan have deteriorated to some extent.

Mr. Bhagwat.—Yes.

Hand driven and power driven machinery.

Dr. Matthai.—Do you think that there is any advantage in having a system of hand driven machinery instead of power driven machinery? Is the wastage less, is the quality better or are you able to give better attention?

Mr. Bhagwat.—We can give better attention in the former case.

Dr. Matthai.—Is there less wastage?

Mr. Bhagwat.—The thing is just now the Indian labour is not intelligent nor is it skilled to work on the power machines. It cannot be immediately trained.

Dr. Matthai.—Leaving that question of training alone, taking the question of wastage, do you think that you are able to do with less wastage?

Mr. Bhagwat.—I can't say.

President.—We were told yesterday that you had to do the filling by hand where dipping had been done by hand because dipping was not good and uniform when done by hand and if they filled the boxes by machinery the edges would break and other things would happen. Is it for that reason that in Japan the whole thing is done by hand?

Mr. Bhagwat.—I think if the dipping is done by hand, it is rather difficult to transfer those dipped splints on to the box filling machines.

President.—Why?

Mr. Bhagwat.—Because these are collected in trays of five or six rows and they have again to be gathered together and put in one tray just as we do after the levelling machine. They are put into one tray and that tray has to be transferred to the box filling machine, so that this further trouble is there and perhaps to save that it is done.

President.—Do you consider that hand dipping is as good as machine dipping?

Mr. Bhagwat.—Quite good. Perhaps it is more uniform than the machine dipping, because in hand dipping they could see quite correctly whether the chemicals are there well spread or evenly spread.

Mr. Mathias.—So far as chemicals are concerned for making 50 gross matches would you use more chemicals if you did the dipping by hand instead of by a machine?

Mr. Bhagwat.—No.

Mr. Mathias.—Have you any personal experience?

Mr. Bhagwat.—I cannot say, but I don't think they will require more chemicals for hand dipping.

Dr. Matthai.—What I should like you to explain to me is this. You are in charge of a factory in which most of the work is done by manual labour. I find from what Messrs. Adamjee Hajee Dawood and Company told us yesterday that the cost of power in a power driven machinery is after all a very small part of the cost of matches. If the power driven machinery is not more expensive, why is it that in Japan and in other big factories they do not resort to the power driven machinery and do away with the hand driven machinery. There must be some advantage.

Mr. Bhagwat.—In Japan the industry dates as far back as 1890. For a long time people are accustomed to make matches. At that time in Japan labour was cheap. With the cheap labour it was much cheaper to manufacture these matches even by hand.

Dr. Matthai.—And most of that work is done by women.

Mr. Bhagwat.—Box making, filling and packing are done by women.

Dr. Matthai.—When you introduce power driven machinery and when you have got to employ skilled labour, labour becomes more expensive, but if it is a hand driven machinery, practically all the work could be done by women whom you can employ on a lower rate of wages. That might be the explanation.

Mr. Bhagwat.—As a matter of fact in Japan boxes that are prepared by hand are very cheap compared to machine made boxes.

President.—Have you got any recent prices of the different things, splints, boxes, etc., in Japan?

Mr. Bhagwat.—I have not got actual figures, but I can give you a rough idea about that.

President.—That means that at every stage the manufacturer has got to make some profit.

Mr. Bhagwat.—In summer the prices are cheaper for boxes and accordingly they calculate their cost for the finished product.

Finance of the Company.

President.—Has any Japanese capitalist any interest in your works?

Mr. Bhagwat.—No.

President.—None at all.

Mr. Bhagwat.—No.

President.—Is the machinery supplied by the Japanese firm?

Mr. Bhagwat.—We imported machinery from them. That was in our former factory. We got it from one Japanese manufacturer from whom we were getting matches before.

President.—He has no direct interest of any kind.

Mr. Bhagwat.—No.

President.—It is not financed in any indirect way by any Japanese firm.

Mr. Bhagwat.—It is financed by M. H. Hirjee and Company.

President.—Can you swear that it is so? So far as you are concerned it is financed by the proprietor.

Mr. Bhagwat.—Yes.

Quality of Indian made matches.

President.—Now as regards the difference in quality you mention two defects in Indian matches. The colour is not as white as that of the foreign matches and they are easily breakable.

Mr. Bhagwat.—Yes.

President.—That colour doesn't interfere with the lighting quality of the match, does it?

Mr. Bhagwat.—No.

President.—Its appearance more or less is a question of taste so far as the consumer is concerned and that taste must have been very largely developed by the importer of foreign matches in the country.

Mr. Bhagwat.—Yes.

President.—Because the foreign matches happen to have a whiter colour.

Mr. Bhagwat.—Yes.

President.—Now as regards the matches being breakable, what do you exactly mean? When do they break? Do they break in lighting?

Mr. Bhagwat.—At the time of striking. If we make thinner sticks like these (sample boxes shown) out of the local wood at the time of striking on the surface they break.

President.—Is that Japanese?

Mr. Bhagwat.—This is Japanese.

President.—Made in Japan.

Mr. Bhagwat.—Yes, the wood is aspen.

President.—All your matches are made of aspen wood.

Mr. Bhagwat.—Some are made of *maulettanshe*.

Mr. Mathias.—In your reply to question 10 you say it is not necessary to import wood from foreign countries. That is not correct. You still import aspen wood.

Mr. Bhagwat.—This was imported last year.

Mr. Mathias.—You are using that.

Mr. Bhagwat.—Yes.

President.—But there are other defects; on striking for instance they glow.

Mr. Bhagwat.—The Japanese matches also glow.

President.—Is there any explosion?

Mr. Bhagwat.—That depends on the composition of the chemicals. We can make it less noisy or more noisy.

President.—I have been trying several matches of yours. They all strike with a little explosion.

Mr. Bhagwat.—Some Chinese merchants prefer striking with a little explosion instead of smooth striking.

President.—Do you deliberately make your heads in order that they should strike with explosion?

Mr. Bhagwat.—We do it. We can make it strike without noise.

President.—Your customers rather fancy noise.

Mr. Bhagwat.—We just make them on the Japanese fashion.

Mr. Mathias.—The imported matches also make some noise.

Mr. Bhagwat.—The Swedish matches do not make so much noise as the Japanese matches.

Mr. Mathias.—When you say that the Indian wood is easily breakable, is that your experience?

Mr. Bhagwat.—Yes.

Mr. Mathias.—It seems to me that some classes of wood are very much less breakable than aspen.

President.—Is it not rather an old idea about Indian matches? Recently they have been able to find better wood and they make better quality matches. This description doesn't apply now.

Mr. Bhagwat.—Better quality matches are now being made.

President.—With reference to your point of Indian matches being breakable that does not seem to have so much force now as it had four years ago.

Mr. Bhagwat.—There is still that blackish colour.

President.—There is not very much difference between aspen and *maulettanshe*.

Mr. Bhagwat.—If we go to the wholesale dealers, they will still say so.

Mr. Mathias.—I take it the whole question is not a question of the consumer's preference, but of the preference of the wholesale dealer. If matches are made of Indian wood, the dealer will offer a lower price. The imported matches have trade marks which are well known and therefore they command a ready sale. It will take sometime for Indian matches to become popular with the consumers. The wholesaler or retailer in the meantime takes advantage of the fact that the colour of Indian matches is rather darker to offer a lower price to the manufacturer.

Mr. Bhagwat.—Yes.

President.—What do you mean by this that the foreign matches are considered dependable throughout the year?

Mr. Bhagwat.—People have got an idea that these are thoroughly damp proof matches and they can use them during the rainy season also.

President.—What is your experience as regards your own matches first of all? Can you make them sufficiently damp proof?

Mr. Bhagwat.—Even the foreign matches are not thoroughly damp proof. Our matches approach to a great extent the foreign matches.

Mr. Mathias.—I take it that no safety match immersed in water would strike.

Mr. Bhagwat.—No. But in a damp climate you can use all matches for lighting.

Mr. Mathias.—All matches are susceptible to dampness.

Mr. Bhagwat.—Yes.

Mr. Mathias.—Only to a greater or less degree.

Mr. Bhagwat.—Yes.

Dr. Matthai.—If people in a market prefer foreign matches, in the same market would they be satisfied if you gave them Indian matches out of imported wood?

Mr. Bhagwat.—They want the whole thing imported.

Mr. Mathias.—You don't get a better price for matches made out of aspen.

Mr. Bhagwat.—Yes, we do.

Price of imported and Indian made matches.

President.—As regards the last point about the money value of the prejudice, I take it what you mean is that foreign matches will always sell for twelve to fourteen annas more than your own matches. Do you mean that you will have to sell your matches for twelve to fourteen annas less than the foreign matches?

Mr. Bhagwat.—Those are the present conditions. At this difference, matches are being sold. If we put up our price, people won't buy our matches.

Mr. Mathias.—If you put up your price and the foreign importer puts up his price.....

Mr. Bhagwat.—If the foreign importer puts up his price first, then only we may get an increased price.

Mr. Mathias.—Is the market governed by your price or the price of the importer of foreign matches?

Mr. Bhagwat.—The foreign manufacturers' price will be the standard. If they reduce their price, people will ask us also to reduce our price.

President.—The point is that they are getting to-day twelve to fourteen annas more than you are getting.

Mr. Bhagwat.—Yes.

President.—Then the price is really fixed by the Indian manufacturer of matches. According to this statement the prejudice in favour of the foreign matches induces the consumer to pay twelve to fourteen annas more. If there is no prejudice in his favour, the foreign manufacturer will have to sell also at Rs. 1-8-0, that is what it comes to. Supposing the Indian consumer has no prejudice in favour of the imported article, then you can also get twelve to fourteen annas more or he will have to sell at the same price as you do.

Mr. Bhagwat.—If there is no prejudice in favour of the foreign article we will get a better price, I mean the same price will prevail for both locally made and imported matches.

President.—The imported matches will have to come down to your price. Your price won't be raised to the level of foreign matches because there is so much competition. How will you be able to get a higher price? He gets the higher price because to-day there is a prejudice in his favour. Supposing the prejudice disappears; he will have to sell his matches more or less at the same price as you do, so that the governing factor is the local price.

Mr. Bhagwat.—He has got a certain price of his own. Taking the cost of production, freight, etc., the foreign manufacturer will arrive at a certain price in Rangoon.

President.—He is now able to recover all that because the Indian consumer thinks that his matches are better and therefore he is able to get twelve to fourteen annas more. Supposing the consumer is a little more intelligent and says "I do not find any difference between our matches and imported matches. Why should I pay more?", then the foreign matches will always sell at the same price or not sell at all.

Mr. Bhagwat.—Quite so.

President.—In such a case how can you raise the price of Indian matches?

Mr. Bhagwat.—That will depend upon the demand and supply.

Dr. Matthai.—In Burma, is there a lot of competition amongst Indian producers?

Mr. Bhagwat.—There is more production.

Dr. Matthai.—There is no kind of understanding among your people as to price.

Mr. Bhagwat.—None at all.

Mr. Mathias.—Have you any experience as to the classes of customers to whom foreign matches are sold? Are the Indian matches sold to the poor people and the foreign matches to the more well-to-do?

Mr. Bhagwat.—It is not like that.

Mr. Mathias.—There is no sharp line between the two. There is no such thing as the rural market in which Indian matches are sold and the urban market in which foreign matches are sold. For instance, do you sell your matches in Rangoon itself?

Mr. Bhagwat.—Yes, in Rangoon and up-country. Through Rangoon merchants, we sell.

Mr. Mathias.—Are your matches sold in Rangoon or are they all sent upcountry?

Mr. Bhagwat.—Much of our production is sold in Rangoon.

Mr. Mathias.—If I go to the bazar, I can buy your matches.

Mr. Bhagwat.—Yes.

President.—During the war, the Swedish matches went out of the country here.

Quality of Japanese matches.

Mr. Bhagwat.—Yes.

President.—The Japanese matches began to come in but they are not as good as Swedish matches.

Mr. Bhagwat.—Some of their brands are quite good.

President.—Do you consider them as good as Swedish matches?

Mr. Bhagwat.—Yes.

President.—In India, will the Japanese match fetch the same price as the Swedish match? Will it get twelve to fourteen annas more than the Indian match?

Mr. Bhagwat.—It is getting now.

President.—Are you sure?

Mr. Bhagwat.—Yes.

Mr. Mathias.—Have you any samples of Japanese matches?

Mr. Bhagwat.—I haven't. I can get them for you. The match with the best label on is being sold at a higher price.

Mr. Mathias.—To-day there is the same prejudice in favour of the Japanese match as there is in favour of the Swedish match and the Japanese match on the whole realises twelve to fourteen annas more than the Indian match.

Mr. Bhagwat.—It is only the better quality match of Japanese manufacture that fetches that price.

Dr. Matthai.—There is also an inferior quality of Japanese matches coming in.

Mr. Bhagwat.—Now-a-days only the best quality comes in.

President.—That is because of the Swedish competition.

Mr. Bhagwat.—Yes, and also because locally made matches are being sold.

President.—Are the Indian matches better than the ordinary Japanese matches?

Mr. Bhagwat.—They are slightly better.

President.—Will they fetch a better price than the ordinary Japanese matches or will people still pay a little more for the Japanese matches?

Mr. Bhagwat.—There is the idea of the people that the Japanese matches are damp proof.

President.—This idea must have been created by the importer.

Mr. Bhagwat.—People have been using Japanese matches for a long time. Further those people who started early in this line in India were not able to produce matches as good as they are doing now.

President.—Do you mean in the earlier stages?

Mr. Bhagwat.—Yes, so the prejudice has got confirmed.

Mr. Mathias.—It is also true that the Japanese matches exported to India were not damp proof.

Mr. Bhagwat.—Some of them were not.

Mr. Mathias.—In fact, the quality of those matches was inferior. Notwithstanding that, the Japanese reputation for matches seems to have survived.

Mr. Bhagwat.—During the war, that was the only country which supplied matches to India.

Mr. Mathias.—During the war, the quality of Japanese matches deteriorated very much indeed. They were not damp proof and they fell into disrepute. After the war, the quality is said to have much improved and their matches now command a premium over the Indian matches. Is not the position exactly similar as regards Indian matches? At the beginning they were not damp proof and were of inferior quality. Now that the quality has improved, should they not command the same price as the others in two or three years time?

Mr. Bhagwat.—In Japan, during the war time, the matches were produced of an inferior type. There was huge production. That was the only country to supply matches to China, Java and India. Even the smallest manufacturers were over-worked. They produced inferior matches and sent out to India.

Dr. Matthai.—You have not noticed any prejudice against the Japanese matches in India.

Mr. Bhagwat.—No.

President.—Which is the best brand of the Japanese matches?

Mr. Bhagwat.—Eagle brand, bamboo shoot brand, label with the word best printed in black colour and the elephant brand, with a rising sun behind.

Dr. Matthai.—There are different kinds of Swedish matches coming into the country at different prices. They are not all of the same kind.

Mr. Bhagwat.—In quality, size or what?

Dr. Matthai.—Some of them fetch higher prices than others.

Mr. Bhagwat.—That depends only on the liking of the people.

Dr. Matthai.—If there are five different prices for Swedish matches for various brands, the difference in price is due to the size of the match box and not due to any quality or chemical composition.

Mr. Bhagwat.—It depends on the size. It is also due to the popularity of the particular label.

Dr. Matthai.—Why is a particular brand popular?

Mr. Bhagwat.—Of their matches, the Tiger Brand is very popular.

Dr. Matthai.—But that is not an old one. How long has that brand been in the Burma market?

Mr. Bhagwat.—Since 1924.

Dr. Matthai.—Now it is a very popular brand.

Mr. Bhagwat.—Yes. The Japanese tiger has been in Burma for a long time.

President.—How long has your 'tiger' been in the market?

Mr. Bhagwat.—Since we started our factory.

Mr. Mathias.—Do you get for your 'tiger' brand any better price than for others?

Mr. Bhagwat.—We are getting a better price for that brand.

Selling arrangements.

President.—Is there any propaganda carried on by the Indian manufacturers to push the Indian matches? Do you allow the same people to sell your matches who sell Swedish matches?

Mr. Bhagwat.—There is no particular propaganda carried on.

President.—If a man is accustomed to sell foreign matches and you want him to sell Indian matches, he can sell larger quantities of foreign matches and get more commission than by selling your matches. Therefore if he is to push your matches, either he has got to give up that bigger commission or he has to get a much bigger commission from you. That is one of your difficulties.

Mr. Bhagwat.—Yes.

President.—People who sell foreign matches are the persons who sell Indian matches.

Mr. Bhagwat.—Yes.

Mr. Mathias.—As regards the label, you say that the tiger brand fetches a better price than any other. Though the match is the same, yet on account of the label, you get a better price.

Mr. Bhagwat.—Formerly the tiger brand was coming from Japan.

Mr. Mathias.—That shows that the actual consumer of your match does not really judge your manufacture. He simply buys what is pushed on to him.

Mr. Bhagwat.—During the rainy season, he comes to know which is better and which is not.

Mr. Mathias.—You say that all your matches are better, so that the tiger brand is as good as the other brands. If the consumer takes trouble to enquire he will see that he is paying more for the label than for the match. So, it depends on the effort made by the wholesaler than on the judgment of the consumer.

Mr. Bhagwat.—Yes.

Dr. Matthai.—Is there a home rule brand?

Mr. Bhagwat.—That brand is prevalent in Bombay.

Dr. Matthai.—Is it very popular?

Mr. Bhagwat.—I cannot say. I know nothing of Bombay.

President.—Apart from the question of prejudice, owing to your labour not being trained and other things, the quality generally speaking may be inferior. You have hand dipping. It may be uneven. That affects the quality of matches. A consumer may say that these matches must be inferior "look at the boxes and the painting on the sides." The Japanese matches I take it would be better.

Mr. Bhagwat.—Yes.

President.—Twelve to fourteen annas difference is not entirely due to prejudice. Part of that is to be explained by inferiority in the finish or quality.

Mr. Bhagwat.—Very little. I think the other people are making good boxes by machine.

President.—But hand painting cannot be really as good as machine painting.

Mr. Bhagwat.—It can be.

President.—It is not. You cannot have the same uniformity with hand painting as you would have if it were done by a machine. I am just trying to point out that a good deal of it may be explained by prejudice but not all.

Mr. Bhagwat.—Quite so.

President.—The prejudice you may be able to get over. As regards the difference in quality, you may be able to get over when your labour is better trained.

Mr. Bhagwat.—Yes.

President.—The Indian manufacturer does not take care to see that inferior matches are not put in the market. He put into the market formerly any kind of match—no matter how bad it was.

Mr. Bhagwat.—Yes.

Dr. Matthai.—Is it your experience that since 1922 the difference between Indian matches and imported matches in price has always been between twelve and fourteen annas.

Mr. Bhagwat.—It was higher but it is less now.

Dr. Matthai.—Because your quality has improved and the market is getting more and more used to it.

Mr. Bhagwat.—Yes.

Mr. Mathias.—Before the duty of Rs. 1-8-0 was imposed there was no margin for such a big difference, was there?

Mr. Bhagwat.—At that time very inferior Japanese matches used to come.

Mr. Mathias.—Before the war when the duty was 5 per cent. matches were so cheap then that there was no room for any such difference as annas 12 between Indian and Japanese matches.

Mr. Bhagwat.—At that time there was a difference of annas 4 per gross, Indian matches being offered at about 8 to 9 annas while the foreign were sold at 13 to 14 annas.

Mr. Mathias.—As the duty increased so this margin increased so that this difference in the price between Indian and foreign matches has increased in proportion to the price?

Mr. Bhagwat.—That is so.

Raw Materials—Timber.

President.—As regards imported wood you give the price of imported wood as 90 to 95 yen per ton c.i.f. and you give the exchange at 100 yen = Rs. 136.

Mr. Bhagwat.—At present it is so.

President.—That means that you get the wood at Rs. 123 per ton c.i.f. and to that you have got to add 15 per cent. or Rs. 18. That brings it to Rs. 141; to that you have got to add Rs. 8 to 10 per ton, the total coming to Rs. 150 per ton. Is that the present price?

President.—That is about five times as much as the price of Indian wood?

Mr. Bhagwat.—Yes.

President.—You use about two-thirds of a ton for a gross of matches?

Mr. Bhagwat.—Yes.

President.—That would include veneers and splints both?

Mr. Bhagwat.—Yes.

President.—So that it will come to Rs. 100 per 100 gross?

Mr. Bhagwat.—Yes.

President.—You have to pay Re. 1 for a gross?

Mr. Bhagwat.—We do not make veneers out of this wood.

President.—If you made both splints and veneers it would come to Rs. 100 for 100 gross, that is to say Re. 1 for this alone?

Mr. Bhagwat.—That is so.

President.—You say you only make splints. How many gross splints can you make out of one ton of aspen?

Mr. Bhagwat.—400 gross out of one ton, that is 8 gross per c.ft.

President.—That is to say, you want only 12½ cubic feet for 100 gross?

Mr. Bhagwat.—Yes, about that.

President.—Then for veneers how much would you require?

Mr. Bhagwat.—We would require 16 c.ft. of wood for 100 gross of box veneer.

President.—What wood would you use for veneer?

Mr. Bhagwat.—Pine wood.

President.—What is the cost of that?

Mr. Bhagwat.—Rs. 50 landed.

President.—And you use 16 c.ft. so that it would be about Rs. 16 per 100 gross.

Mr. Bhagwat.—Yes.

Mr. Mathias.—For splints 12½ c.ft.?

Mr. Bhagwat.—Yes.

President.—In that case you would require 28½ c.ft. for 100 gross?

Mr. Bhagwat.—Yes.

President.—Altogether the wood would cost you Rs. 53-8-0, that is more than 8 annas for wood alone per gross.

Mr. Bhagwat.—Yes, when we make out of aspen.

Dr. Matthai.—If you were using indigenous wood you would have to use more for splints. How much more would it be if you were taking sawbya?

Mr. Bhagwat.—About 15 c.ft.

President.—And the veneer will remain about the same?

Mr. Bhagwat.—Yes.

President.—So that the saving would only be 2½ to 3 c.ft.

Mr. Bhagwat.—But the difference in price would be very great.

That would be the actual c.ft. of sawbya we would require. There will be wastage also in the indigenous wood whereas in the aspen there is very little wastage.

Dr. Matthai.—When you say you require 30 c.ft. per 100 gross, what you mean is 30 c.ft. in the log. Taking your statement that 30 c.ft. is equal to 100 gross, that is to say 50 c.ft. will be about 166 gross. am I to understand that when your contractors deliver this wood at your factory, this 50 c.ft. would result in your factory in 166 gross or does it mean that after you have removed the bark and removed the spoilt part of the wood, you get 166 gross per 50 c.ft.?

Mr. Bhagwat.—It is with bark and everything on.

Mr. Mathias.—How do you arrive at the calculation?

Mr. Bhagwat.—When we get this aspen wood from Japan some allowance is made for the bark.

Mr. Mathias.—How would you allow for the wastage in the aspen or in the sawbya wood for instance?

Mr. Bhanwat.—We take, say, a particular quantity that has been consumed in one month and we just approximately calculate how many splints have been made out of that quantity, what has been consumed in the process of manufacture and what is the balance at the end of the month, and from that have a rough idea of how much wood has been consumed for producing that quantity of splints. Every month while taking stock if there is a big heap of splints lying there, the man incharge gives us an idea as to how much it can be.

Mr. Mathias.—Do you measure up all waste wood and all your bark?

Mr. Bhagwat.—We don't.

Mr. Mathias.—I can quite understand your saying at the end of the month we have received so much c.ft. in the log and we have produced so many splints and boxes, and therefore the production is so much per c.ft. That I can understand, but I cannot follow how by calculating at the end of the month the total amount of splints and boxes you can say how much the consumption is, excluding wastage and bark. It seems to me impossible.

President.—What I am really trying to find out is what this wastage amounts to. The log is 50 c.ft. That is by measurement. You cannot measure the splints and say it produces so many cubic feet of splint because it will be much more than 50 c.ft. What I wish to know what really the wastage is that can be ascertained by weight. Supposing you weigh a log before peeling and chopping and so on and then you collect the bark and the other wastage. Then

you would know that so much percentage actually represents the wastage. The thing would be to weigh the log first and then the splints after they have been dried: then the difference is the wastage. You don't do that, do you?

Mr. Bhagwat.—No.

Dr. Matthai.—May I ask you whether these figures that you have given us of production per cubic feet has been taken from Mr. Troup's book or any other work? Does it represent your actual calculations?

Mr. Bhagwat.—Our Japanese expert has got some idea of the wood consumed in Japan and also of wood that is consumed in our factory during the last five or six months.

President.—In Japan they would get the log with the bark and everything. How many cubic feet would they use per 100 gross of the wood in the log as it comes from the forest?

Mr. Bhagwat.—For 100 gross of splints they would consider 10 c.ft. sufficient in the log.

President.—Here you use 12½ c.ft. without the bark.

Mr. Bhagwat.—Yes. We require more here.

President.—Here without bark you require 12½ c.ft., do you not?

Mr. Bhagwat.—No. 12½ c.ft. in the bark.

President.—Then you get your logs in the bark, do you?

Mr. Bhagwat.—Yes.

President.—You have to use 2½ c.ft. more than they do in Japan? What is it due to?

Mr. Bhagwat.—By keeping the wood longer here in India—they are kept about 8 months—this wood gets very loose in texture.

President.—The wood deteriorates in the log if it is kept for a number of months, is that what you mean?

Mr. Bhagwat.—The wood comes to Japan from Russia and is stored there and then it comes here and is again stored. Our wood came here in the month of March and we had to use it in the month of September so it was kept here for about six months and it is quite possible they had been stored in Japan for quite a long period before being sent here, and that is why there was much deterioration.

President.—In order to preserve the log they apply something, don't they, to the ends?

Mr. Bhagwat.—No. But I have heard that in Europe they do it, but I have not seen anything being applied to the Japanese log.

Mr. Mathias.—You can't give us the production per 50 c.ft. in the log of Indian wood?

Mr. Bhagwat.—No.

Dr. Matthai.—When you take wastage in your cost statement I think you mean by wastage three things—loss in the bark, spoil wood

Mr. Bhagwat.—Loss of the bark we cannot take because we leave off the bark when measuring the logs.

Dr. Matthai.—When you say 12½ c.ft. per 100 gross it includes also the bark, does it not?

Mr. Bhagwat.—That is for Japanese.

Dr. Matthai.—But I mean you have no figures about Indian wood. I am taking your figure with regard to imported wood. 12½ c.ft. make 100 gross.

Mr. Bhagwat.—Yes.

Dr. Matthai.—Then you say there is wastage.

Mr. Bhagwat.—Yes.

Dr. Matthai.—That wastage occurs partly in the bark, partly in the spoiled wood and partly waste in the factory.

Mr. Bhagwat.—The middle portions are left out.

- President.*—You have been using *sawbya* and *maulettanshe* only recently.
- Mr. Bhagwat.*—Yes.
- President.*—Practically this year.
- Mr. Bhagwat.*—Since last year.
- President.*—Since 1926.
- Mr. Bhagwat.*—Since September or October, 1926.
- President.*—You practically buy wood from the dealers.
- Mr. Bhagwat.*—Yes.
- President.*—You haven't got forests of your own.
- Mr. Bhagwat.*—No.
- President.*—You get it at Rs. 85 to Rs. 40.
- Mr. Bhagwat.*—Yes.
- President.*—The difference you give between *sawbya* and *maulettanshe* is Rs. 2 to Rs. 3.
- Mr. Bhagwat.*—Yes.
- President.*—*Maulettanshe* is Rs. 3 cheaper.
- Mr. Bhagwat.*—Yes.
- President.*—It appears to be superior to *sawbya* in some respects.
- Mr. Bhagwat.*—It depends on the particular contractor. Some contractor will ask a higher price and some a lower.
- President.*—You get *maulettanshe* in smaller quantities than *sawbya*.
- Mr. Bhagwat.*—We are getting more *sawbya*.
- President.*—Because *sawbya* is more easily available than *maulettanshe*.
- Mr. Bhagwat.*—Yes.
- President.*—Or is it because the one comes from the Mahuya.
- Mr. Bhagwat.*—It comes from some distance.
- President.*—You get your pine wood from Kalaw or Toungoo.
- Mr. Bhagwat.*—We get Kalaw pine.
- President.*—When you say that you require 1,200 tons a year, that means about 700 tons for veneers. Is it not so?
- Mr. Bhagwat.*—Yes.
- President.*—That will be pine.
- Mr. Bhagwat.*—Yes.
- President.*—Because you use a little more for veneers and about 500 tons for the other. Those are your total requirements.
- Mr. Bhagwat.*—Yes.
- President.*—You say when you reach your full capacity which is about 1,000 gross per day, you would require 2,500 tons in the same proportion.
- Mr. Bhagwat.*—Yes.
- Mr. Mathias.*—1,000 gross a day.
- Mr. Bhagwat.*—Yes.
- Mr. Mathias.*—For 600 gross you require 1,200 tons. For 1,000 gross you don't require 2,500 tons.
- Mr. Bhagwat.*—We will require it in the same proportion.
- President.*—How many working days in a year do you work?
- Mr. Bhagwat.*—About 300 days.
- Mr. Mathias.*—That gives you 3 gross per c.ft.
- Mr. Bhagwat.*—30 c.ft. for 100 gross.
- Mr. Mathias.*—When you speak of wood here, 1,200 tons a year, you must be speaking of wood as you buy from the contractor in the log and not the wood without wastage and without bark. Am I correct in thinking that your calculation is something over 3 gross per c.ft. in the log?

Mr. Bhagwat.—Yes.

Mr. Mathias.—When you said it was just now 3 gross for one cubic foot, your figures are not correct.

Mr. Bhagwat.—30 c.ft. in the log will give 100 gross. That is correct.

President.—I take it you don't know really where this wood comes from. It is delivered at your factory by these people and you don't find any difficulty in procuring your supply.

Mr. Bhagwat.—No.

President.—When your requirements come up to 2,500 tons a year, do you anticipate any difficulty or would you still get wood at the same price as you are getting now?

Mr. Bhagwat.—At the same price I think we will be able to get.

Dr. Matthai.—These contractors deliver at your factory.

Mr. Bhagwat.—Yes.

Dr. Matthai.—They are small men dealing only in soft wood.

Mr. Bhagwat.—They are sometimes brokers in paddy and sometimes in timber also.

Dr. Matthai.—You say later on you were assured that you would get the wood. Where did you get this assurance from?

Mr. Bhagwat.—From the contractors.

Mr. Mathias.—You don't find any deterioration in the wood supplied by the contractor.

Mr. Bhagwat.—No.

Mr. Mathias.—It is lauded in good condition ready to make splints.

Mr. Bhagwat.—Yes.

President.—Do you find that there is any difference in the quality of the wood of the same species. Is the quality consistent? Sometimes do you find *sawbya* giving you good results and at other times bad results?

Mr. Bhagwat.—Woods of the same species coming from different places are giving different results. As regards *sawbya*, there is white *sawbya* and grey *sawbya*, male and female trees giving different colours.

Mr. Mathias.—Is the difference appreciable?

Mr. Bhagwat.—Yes, there is considerable difference.

President.—Then what do you do?

Mr. Bhagwat.—We make the splints.

President.—Do you manufacture them separately?

Mr. Bhagwat.—We mix them up.

Mr. Mathias.—With regard to your pine, do you have to give your trees any preliminary treatment in order to prevent the logs from getting damaged?

Mr. Bhagwat.—No.

Mr. Mathias.—You find no difficulty about making veneers owing to knots.

Mr. Bhagwat.—Yes.

Dr. Matthai.—You generally boil your pine.

Mr. Bhagwat.—No.

President.—Have you tried to make splints out of the pine?

Mr. Bhagwat.—Yes.

President.—That is only recently.

Mr. Bhagwat.—Yes.

Dr. Matthai.—Is the pine splint more brittle than *sawbya* splint?

Mr. Bhagwat.—It is not.

President.—How long have you been experimenting with pine wood?

Mr. Bhagwat.—Only recently.

President.—But you said that you don't find any difficulty in peeling or chopping.

Mr. Bhagwat.—We think we might continue to make splints out of pine.

President.—You think so.

Mr. Bhagwat.—Because they take a better finish. The splints are evenly cut.

President.—You will have the same wood for veneer and for splints.

Mr. Bhagwat.—Yes.

President.—But do you think that the supplies of pine in the Shan States are quite satisfactory?

Mr. Bhagwat.—I don't know. I wish to go there, but I have not been there so far.

Dr. Matthai.—Your pine costs you about Rs. 10 more than *sawbya*.

Mr. Bhagwat.—Yes.

President.—But you get pine all the year round because it comes by rail and there won't be any difficulty about floating at all.

Mr. Bhagwat.—Quite.

President.—In answer to question 24 you say you are assured of a sufficient supply for the next 10 years. What makes you think so?

Mr. Bhagwat.—The supplier who is a big man says that he can supply for quite a long time.

President.—I don't know what he says is true or not.

Mr. Mathias.—When you say you think that you are assured of a sufficient supply for 10 years at least, you go on the supposition that no more match factories would be started and that no more exports would be made to India. This is really a guess work.

Mr. Bhagwat.—Yes.

Dr. Matthai.—You have no idea as to what profit the contractor makes on that.

Mr. Bhagwat.—No.

Chemicals, etc.

President.—Now taking the other raw materials, you have not given us any figures to show what quantities you really use of these different chemicals and so on in the manufacture per 50 gross or 100 gross. We wanted to know that rather. Do you keep your cost accounts in such a way as to tell us? You don't keep any cost sheets.

Mr. Bhagwat.—No.

President.—How will you be able to find out what it is you use?

Mr. Bhagwat.—We will have to find out from the actual quantity.

President.—You use nearly all imported materials, chemicals and so on. You don't get any Indian raw materials.

Mr. Bhagwat.—No.

Dr. Matthai.—You don't mention in your list blue match paper and green match paper.

Mr. Bhagwat.—We only use one kind of match paper from Japan.

Mr. Mathias.—I see you get your wax from the Burma Oil Company. Do you find that satisfactory?

Mr. Bhagwat.—We give them an order to make for a lower melting point.

Mr. Mathias.—What is your melting point?

Mr. Bhagwat.—105, 106 and 108 degrees.

Mr. Mathias.—Do you find the charges of the Burma Oil Company less than the cost of similar stuff imported from Europe or Japan?

Mr. Bhagwat.—The same price.

Mr. Mathias.—They make no allowance on account of the freight.

Mr. Bhagwat.—Sometimes the price here is higher. In the beginning they were quoting a higher price than the Standard Oil Company.

Mr. Mathias.—So far as economy is concerned, apart from sentiment, there is no particular object in getting your wax from the Burma Oil Company.

Mr. Bhagwat.—No.

Dr. Matthai.—Where do you get your printing done?

Mr. Bhagwat.—We get the labels printed from Japan.

Labour.

President.—The machinery is only used by you up to splint or veneer cutting.

Mr. Bhagwat.—Yes.

President.—After that you hand over the work to the manual labour.

Mr. Bhagwat.—Yes.

President.—I wish to know after you have made the splints, do you give them to be dipped on a contract system or do you get them dipped under your own management?

Mr. Bhagwat.—The frame filling work is done by contract.

President.—On what basis do you pay?

Mr. Bhagwat.—5 pice for one rack containing 30 frames.

President.—How many gross of splints would it contain?

Mr. Bhagwat.—5 gross.

President.—For 100 gross it comes to Rs. 1-9-0.

Mr. Bhagwat.—Yes.

President.—Then the dipping is done by you.

Mr. Bhagwat.—That is done by salaried people. After that the emptying work is done by contract people.

President.—How much you pay for emptying?

Mr. Bhagwat.—As. 12-6. Even for box filling we pay Rs. 7-8-0 per 100 gross.

President.—For the filling only.

Mr. Bhagwat.—Yes.

President.—Does the box filling mean labelling, etc.?

Mr. Bhagwat.—Only box filling.

President.—That finishes with splints.

Mr. Bhagwat.—Then there is side painting.

President.—What would be the cost of that?

Mr. Bhagwat.—Re. 0-7-6 for painting 100 gross.

President.—Is there anything else.

Mr. Bhagwat.—We pay Re. 1-1-6 for packing 100 gross. Then they are put into the tins. That work is done by salaried people.

President.—That is as regards splints. Now what about veneers?

Mr. Bhagwat.—We make the veneers but the box making is done by women. We pay one rupee per thousand boxes, inside and outside complete.

President.—It comes to Rs. 14-4-0 per 100 gross.

Mr. Bhagwat.—There is wastage. In order to provide for that, we must take it at Rs. 15.

President.—What about labelling?

Mr. Bhagwat.—That is also done by contract—about three pice per thousand or about Re. 0-10-6 per 100 gross.

President.—Is there any manual labour done by contract?

Mr. Bhagwat.—There is tinning. The zinc sheets come in long sheets and they have to be made into square tins.

President.—How much is that?

Mr. Bhagwat.—It will be one rupee for 12 tins containing 100 gross.

President.—The total comes to Rs. 28-1-0.

Mr. Bhagwat.—Yes.

President.—Then, there remains the peeling, cutting, chopping, etc. That is all fixed labour.

Mr. Bhagwat.—Yes.

President.—Can you give me any idea as to what that means? What is your total wages bill for the year?

Mr. Bhagwat.—I shall let you know later.

Dr. Matthai.—You say in answer to question 34 that you employ 100 males and 60 females. Are they all salaried employees?

Mr. Bhagwat.—All the females are engaged on a contract system.

Dr. Matthai.—How many salaried people do you have?

Mr. Bhagwat.—I shall send you that information later.

President.—Have you got any Japanese wages?

Mr. Bhagwat.—Yes.

President.—Can you give us any figures?

Mr. Bhagwat.—The frame filling is practically the same. The biggest difference comes in packeting, box filling, and box making.

President.—What would be the difference?

Mr. Bhagwat.—They will pay only Rs. 2-8-0 where we pay Rs. 7-8-0 for box filling.

President.—For box making?

Mr. Bhagwat.—They will pay Rs. 6 where we have to pay Rs. 15.

President.—You are paying Rs. 14 (Rs. 9 plus Rs. 5) more. That is just about double.

Mr. Bhagwat.—Yes.

Mr. Mathias.—Can you tell me how many boxes a man or woman can fill in a day working 10 hours?

Mr. Bhagwat.—One woman, after about 10 months' practice in our factory, can fill in 12½ gross per day?

Mr. Mathias.—She makes one rupee per day.

Mr. Bhagwat.—Yes.

Mr. Mathias.—As regards box making, how many can a woman do?

Mr. Bhagwat.—The peculiar thing about box making is that these boxes are done by women in their houses at their leisure. So, we cannot have any exact idea. I think that one woman will make about 700 to 900 boxes a day.

Mr. Mathias.—It comes to 5 or 6 gross a day.

Mr. Bhagwat.—Yes.

Mr. Mathias.—One or two women working at leisure can make about Rs. 1-8-0 a day.

Mr. Bhagwat.—Yes. The children also help in making boxes.

Mr. Mathias.—Is there much competition in box making?

Mr. Bhagwat.—Not much.

Mr. Mathias.—How are the rates fixed?

Mr. Bhagwat.—The women here by going to roll cigars in a cigar factory can get about ten to twelve annas a day. We thought that if we could give a little more than that, we would be able to attract labour.

Mr. Mathias.—Your rate is really determined by the rate given by the cigar and cigarette manufacturers and you give something more.

Mr. Bhagwat.—Yes. That is also the Burmese umbrella making.

Mr. Mathias.—Is it mostly Burmese women that you employ?

Mr. Bhagwat.—All Burmese.

Dr. Matthai.—You give the veneers paper, etc., to the women and they take them home and bring them back in the shape of boxes.

Mr. Bhagwat.—We give the veneers to one contractor. That contractor again subdivides amongst 5 or 6 women. We receive these boxes from the contractor twice a week.

Mr. Mathias.—You deal with a contractor.

Mr. Bhagwat.—Yes.

Mr. Mathias.—So that you do not know what the contractors pay.

Mr. Bhagwat.—The contractors make one anna per rupee. They get paid from us only on two days a week. But they will have to pay to the women when they hand over the boxes.

Mr. Mathias.—You don't think that it would be a better proposition to deal with labour direct, thereby eliminating the middleman?

Mr. Bhagwat.—The middleman has to do some other work. The women sometimes bring the boxes loose but the middleman when delivering the boxes will deliver them in bundles of so many boxes.

Mr. Mathias.—If you don't employ the contractors, you will probably have to keep one or two clerks to count the boxes.

Mr. Bhagwat.—Yes.

President.—Do you examine the boxes to see that they are properly made?

Mr. Bhagwat.—Yes.

President.—Do you have to condemn a large percentage of these?

Mr. Bhagwat.—In the beginning we did, but not now.

President.—Supposing some boxes are spoilt, what do you do? Do you fine them?

Mr. Bhagwat.—We pay at a less rate for that particular bundle.

President.—You say that you have got three experts, one chemist, one engineer and one general supervisor. Are they all Japanese?

Mr. Bhagwat.—Yes.

President.—The chemist is, I take it, in charge of the chemical composition and makes the formula for the head and the paint.

Mr. Bhagwat.—Yes.

President.—What does the engineer do? There is no large machinery to look after.

Mr. Bhagwat.—He is an expert in handling the match machinery that we have. If anything goes wrong in the peeling, or chopping machine, he will attend to that.

President.—How long has he been with you?

Mr. Bhagwat.—For the last 4 years.

President.—Are you training Indians now?

Mr. Bhagwat.—Yes.

Dr. Matthai.—Have these experts been appointed for any fixed term?

Mr. Bhagwat.—They were appointed for 3 years.

President.—They were taken from the Japanese match factory or from the machinery makers.

Mr. Bhagwat.—From the factory. They were working in a match factory there for a long time.

President.—In the factory itself where there is machinery, you employ chiefly Indian labour.

Mr. Bhagwat.—Yes. There are very few Burmans.

President.—They are paid by the month.

Mr. Bhagwat.—Yes.

President.—What is the average wage that you pay.

Mr. Bhagwat.—It will be a little over one rupee a day.

President.—Do you have any trouble with that class of labour? Do you get them here or do you have to get them direct from India?

Mr. Bhagwat.—We get it locally.

President.—As regards power, I don't wish to ask you any questions.

Market.

President.—As regards market, how do you get a total of 1,800,000 gross per year for Burma.

Mr. Bhagwat.—I took the import figures.

President.—Besides that, Adamjee's are manufacturing a million gross and you would be manufacturing about 200,000 gross. The Muslim Factory must be making about the same quantity as you do. In addition to that, there is the import of a million gross here.

Mr. Bhagwat.—Yes.

Mr. Mathias.—Is this 150,000 gross a month.

Mr. Bhagwat.—Yes.

Dr. Matthai.—If the price of matches comes down, still further, do you think that the market would increase considerably?

Mr. Bhagwat.—No.

Dr. Matthai.—You cannot stimulate consumption by lowering prices.

Mr. Bhagwat.—No.

Dr. Matthai.—What is the present retail or bazar price for a full size match of yours?

Mr. Bhagwat.—One pice per box.

President.—Is there much illicit importation of matches on the border?

Mr. Bhagwat.—Japanese or Hong Kong matches come up to Bangkok by sea and to Moulmein by land.

Competition.

President.—As regards competition you say "The competition is keenest both from Japan and Sweden but now-a-days more from the latter." It has been stated to us that there is a combine between the Japanese and Swedish manufacturers in Japan.

Mr. Bhagwat.—There are two or three factories which the Swedish have purchased from the Japanese people.

President.—So that competition is from Sweden to that extent is it not? Are these the people who export most of the matches to Burma?

Mr. Bhagwat.—There is one factory outside the combine and that is one of the biggest factories in Japan—the factory—who export the eagle and the bamboo shoot brands.

President.—You say "We do not know exactly the prices during 1918-22, those in 1922-26 were Rs. 2.6-0 per gross to Rs. 3.2-0 depending upon the quality and brands." Can you give us prices for each year separately?

Mr. Bhagwat.—No.

Mr. Mathias.—You were importing matches?

Mr. Bhagwat.—These are prices at which the Japanese are selling here. We are importing very small quantities in Rangoon.

Mr. Mathias.—Are these retail prices?

Mr. Bhagwat.—Wholesale.

President.—Can you give me prices of matches in Japan itself to-day for local use?

Mr. Bhagwat.—About 30 yen per 50 gross; that comes to about Rs. 40. That does not include any zinc sheet or case. These are all sold there in small bundles.

President.—What would be the cost to be added for the zinc sheet and the case?

Mr. Bhagwat.—Rs. 4 for the zinc sheet and Rs. 3-8-0 for the packing case.

President.—That will make it about Rs. 47-8-0. That is the price at which it is sold in Japan? Now you say it comes here c.i.f. landed at Rs. 50 per 50 gross.

Mr. Bhagwat.—These goods are sold in Japan at a higher price than the price at which they are sold in the export market.

President.—That means Rs. 50 c.i.f. Rangoon. What is the freight?

Mr. Bhagwat.—Rs. 4 per case of 50 gross; that makes Rs. 51-8-0. Then there will be some other charges too.

President.—Instead of that they send it out here at Rs. 50? What is the export price there if the local price is 30 yen?

Mr. Bhagwat.—For export they will accept much less; about 4 yen cheaper, that is about Rs. 5.

President.—You say they sell in Japan at 30 yen and for export they quote about 4 yen less, that is about Rs. 5 less. Then you have got to add other charges and at what price will they be sold in the bazar?

Mr. Bhagwat.—Rs. 2-10-0 a gross wholesale.

President.—And in retail how much would it be?

Mr. Bhagwat.—The retailers sell at Rs. 135 for six tins of 50 gross. Rs. 2-11-0 will be the retail price.

Mr. Mathias.—Rs. 2-11-0 will be retail price and Rs. 2-10-0 wholesale.

Mr. Bhagwat.—Yes.

President.—Can you give us the name of any importing house?

Mr. Bhagwat.—Messrs. Eng Hing Hwat Brothers.

President.—What price do you realise for local matches?

Mr. Bhagwat.—Rs. 1-12-0 to Rs. 1-14-0.

President.—That ought to give you a very good margin.

Mr. Bhagwat.—We realized this up to last year May but now it is Rs. 1-9-0.

President.—You have given the cost of 50 gross as Rs. 74 and therefore for 100 gross it comes to Rs. 148.

Mr. Bhagwat.—That is so.

President.—You sell at Rs. 1-9-0 a gross so you realize Rs. 156. You manufacture 600 gross a day or 180,000 a year so that you make about Rs. 15,000. Even if your capital was a lakh of rupees it would not be bad. It is not a bad return.

Mr. Bhagwat.—It ought to be more because of the credits we have to allow. It is too much.

President.—I mean to say that at Re. 1-9-0 you are not doing badly and it would pay you to continue your business.

Mr. Bhagwat.—Sales are slower now-a-days.

President.—Considering everything it is not bad. Now the point arises, in order to dispense with protection you have to bring your fair selling price down from Re. 1-9-0 to Re. 1. Supposing there was no duty, is there any chance of your being able to do so?

Mr. Bhagwat.—We can show economy only in labour. As this labour becomes more and more trained they should be able to produce more.

President.—How will you bring your costs down by 9 annas? In what direction can you show economy?

Dr. Matthai.—By cutting down the wages or reducing the number of labourers?

Mr. Bhagwat.—As they become more and more efficient they may accept less per 1,000 boxes.

Dr. Matthai.—Will you be able to lower the rates?

Mr. Bhagwat.—Yes. Only recently we have informed the box makers that we shall reduce the rate to 15 annas.

President.—Can you reduce it as much as 9 annas?

Mr. Bhagwat.—This will have to be done slowly; it cannot be done all at once.

Mr. Mathias.—If you so improved the quality of your matches that the prejudice against Indian matches disappeared, won't you be able to produce them in competition with imported matches even without the duty? I am not speaking of the present moment but in course of time.

Mr. Bhagwat.—Yes, it is possible.

Dr. Matthai.—You give us your working capital as Rs. 1,00,000. Do you require so much as that?

Mr. Mathias.—Won't you be able then to produce them in competition with the imported matches?

Mr. Bhagwat.—We shall be able to produce matches in competition.

Mr. Mathias.—The measure of prejudice is now As. 12 a gross. When that prejudice disappears, won't it be possible to compete with the foreign manufacturer even without the duty. I am not speaking of now.

Mr. Bhagwat.—Yes, in course of time it may be possible.

Working Capital.

Dr. Matthai.—You require at present Rs. 1,00,000 as your working capital. Do you require as much as that.

Mr. Bhagwat.—It is calculated like this. Customers are given 30 and 60 days credit. It is only recently we have to start the credit system.

Dr. Matthai.—When you give credit for short periods, have you ever had to raise loans for your working expenses?

Mr. Bhagwat.—No.

Dr. Matthai.—Now you require 1,200 tons a year. How much of that is in stock on an average?

Mr. Bhagwat.—We keep about a month's stock of wood.

Dr. Matthai.—The other imported materials.

Mr. Bhagwat.—About 2 months stock.

Mr. Mathias.—You state that working capital is about a lakh of rupees. Do you mean to say that it is the total capital or do you mean that the working capital is Rs. 1,00,000?

Mr. Bhagwat.—Everything together.

Mr. Mathias.—What I mean by working capital is the amount of capital which represents roughly the stock of raw materials, and the stock of finished goods which you have not disposed of. That amount would be very small. Your return is very quick.

Mr. Bhagwat.—Now-a-days it is not so very quick. We have to go on keeping stock.

President.—The point is this. You have to pay for your raw material and for your semi-finished and finished stock. That money you have got to find either by borrowing, in which case you will have to pay interest, or from your own pocket in which case you are losing interest. The point to ascertain is what is the fair charge on your working capital. Could you give us any idea as to the amount of money locked up in the way of stocks? Could we take for instance a rough figure like the value of one month's production or the value of three weeks production?

Mr. Bhagwat.—I think one month's production will be enough.

Costs.

Mr. Mathias.—In the second part of your answer to question 75 you have given your average costs of making six tins containing 50 gross. Are these actual costs taken from your accounts or mere estimates.

Mr. Bhagwat.—These are averages for about six months.

Mr. Mathias.—I see you have put down wood for splints and boxes at Rs. 60 a ton.

Mr. Bhagwat.—We get wood for splints at Rs. 40 and for boxes at Rs. 50.

Mr. Mathias.—The average between Rs. 40 and Rs. 50 is not Rs. 60.

Mr. Bhagwat.—I have taken into consideration the wastage.

Mr. Mathias.—Including wastage you have put down here 15 c. ft. of wood as producing 50 gross of matches. Yet you have charged the wood at Rs. 60 instead of Rs. 40 or Rs. 45. Rs. 60 rather seems to be high. Even your pine wood costs only Rs. 45. Your *sawbya* and *maulettanshe* cost about Rs. 30 to Rs. 35. Rs. 60 seems fairly high as an average. Your prices for chemicals seem to be rather on the high side. I find that the highest price that Adamjee's stated as having been paid for Amorphous phosphorus was £210 (about Rs. 2,800) a ton against your Rs. 3,360. Could you explain that difference?

Mr. Bhagwat.—There is a slight difference in this. Some people get phosphorous 96 to 98 per cent. and others what is commercially known as 99 and 100 per cent. pure. This 99 and 100 per cent. stuff is nicely powdered. That may be the reason.

Mr. Mathias.—I give you two other instances. For instance, your price for glue is Rs. 1,100 a ton as against Adamjee's Rs. 866.

Mr. Bhagwat.—We get glue in small quantities. We don't buy in big quantities. That may be Continental glue and ours is Japanese glue.

Mr. Mathias.—For sulphur your price is Rs. 300 as against Adamjee's Rs. 168.

Mr. Bhagwat.—These are based on the invoice prices.

Mr. Mathias.—Who sends out these chemicals to you from Japan?

Mr. Bhagwat.—We have our own proprietor there who sends out these things.

Mr. Mathias.—Is he an Indian?

Mr. Bhagwat.—Yes. He has got his export house there. I don't think he will charge us more.

Mr. Mathias.—Is he the proprietor of the match works?

Mr. Bhagwat.—Yes.

Mr. Mathias.—The money entirely belongs to him.

Mr. Bhagwat.—Yes.

Mr. Mathias.—There are no other shareholders.

Mr. Bhagwat.—No.

Mr. Mathias.—It does not belong to a Company.

Mr. Bhagwat.—No.

Mr. Mathias.—Are the chemicals produced in Japan?

Mr. Bhagwat.—Except phosphorous and chlorate most of them are produced there.

Mr. Mathias.—Where do you get phosphorous from?

Mr. Bhagwat.—We get it from Japan, but it is Swedish.

Mr. Mathias.—So far as phosphorous is concerned, would not that be a reason for the higher price?

Mr. Bhagwat.—We can't account for such a very big difference. The freight is not so high.

Mr. Mathias.—I suppose your proprietor dealing in these products would as a wholesale house charge commission to the works in the ordinary way.

Mr. Bhagwat.—Yes, but in Japan big dealers import on a pretty large scale for the Japanese match manufacturers and one can get at a good price there.

Mr. Mathias.—Does it not appear by dealing with your own proprietor's firm you are paying rather more than you would if you purchased your materials direct?

Mr. Bhagwat.—I made enquiries of English firms in England. They would not supply in small quantities. They will require one ton of phosphorous to be bought at one time. We can buy only 300 lbs. or 500 lbs. like that. Unless it is on a bigger scale probably it is not profitable.

Dr. Matthai.—I find that Messrs. Adamjee Hajee Dawood and Company gets phosphorous from Great Britain. Is that because they get it in large quantities?

Mr. Bhagwat.—Their phosphorous may be a little inferior in purity. There are two qualities 96, 98 and 99 and 100 per cent. If they are using a grinding mill for preparing the side composition, they can use 96 and 98 per cent. pure quality of phosphorous at a cheaper rate, whereas we grind it by hand and we require finely powdered stuff which is more costly.

Mr. Mathias.—Do you get your zinc sheets direct from Belgium?

Mr. Bhagwat.—I get them through a friend.

Mr. Mathias.—You don't get it through the proprietor.

Mr. Bhagwat.—No.

Mr. Mathias.—That seems to be the only article in which the price given by Adamjee's and your price agree.

Mr. Bhagwat.—Yes.

Mr. Mathias.—Where do you get your potassium chlorate from?

Mr. Bhagwat.—That I get it from Bullock Brothers here.

STEEL BROTHERS & COMPANY, LIMITED.

Evidence of Mr. J. B. GLASS, recorded at Rangoon on Thursday,
the 24th March 1927.

The Extraction of timber.

President.—We are very much indebted to you for coming to give evidence. I am sorry I was unable to give you any definite idea as to the points on which you would be examined. The questions will be of a general nature because you are not directly interested in the Match Industry. The firm of Steel Brothers is very largely interested in the extraction of timber?

Mr. Glass.—Yes.

President.—You have many years' experience in the line, haven't you?

Mr. Glass.—20 years.

President.—Where are your principal forests in which you work most?

Mr. Glass.—They are distributed over Burma.

President.—In Lower Burma, have you any forests?

Mr. Glass.—Yes, in Prome and Pinyinmana and a small Hardwood forest between Pinyinmana and Toungoo.

President.—I suppose you are interested chiefly in Hardwoods?

Mr. Glass.—Yes.

President.—Do you extract any soft wood?

Mr. Glass.—Practically none at all on a commercial basis.

President.—How does your concession ordinarily run? Do you take a concession for the extraction of particular species or do you extract all kinds of wood in that area?

Mr. Glass.—The concession is for the extraction of about 15 species

President.—Are they named in the concession?

Mr. Glass.—Yes.

President.—The point I am not clear about is this. One provincial Government has stated, anyhow, that if soft wood were extracted at the same time as hardwood, it may be more convenient for the manufacture of matches.

Mr. Glass.—The trouble is that we are unable to get a price which will cover our extraction costs for softwoods. In our Hardwood Forest we are working about 20 miles from the Burma Railways. We have to bring the timber in by light railway. Our costs are heavy.

President.—There is another difficulty about this match wood that it should be fresh.

Mr. Glass.—Yes, that is one of the difficulties. It takes us six to nine months to get our timber into the Mills. By that time softwood for the Match Industry would have considerably deteriorated.

President.—You would get your wood by floating down the river?

Mr. Glass.—We don't. We bring it by rail.

President.—Everything by rail?

Mr. Glass.—Yes.

President.—Is that your own railway?

Mr. Glass.—Yes. The conditions under which we work are such that the wood is sure to deteriorate before it reaches the factory. The soft woods, if we cut logs and keep converted timber for some time, become mouldy.

Dr. Matthai.—Within what time should it be used?

Mr. Glass.—Within three months from the time of felling.

President.—Then, it would not be a practical proposition.

Mr. Glass.—No.

President.—The same difficulty will be experienced as regards Government forests worked by the agency of the Forest Department.

Mr. Glass.—Yes.

President.—We have got to fall back on special soft wood forests or depend on small contractors.

Mr. Glass.—Yes, on the areas close to the railway line. It costs us Rs. 10 to Rs. 15 more to get timber out owing to distance than it does small contractors working railside forests.

President.—Do you do your extraction departmentally or do you do it through contractors?

Mr. Glass.—We have our contractors.

President.—Are they buffalo contractors?

Mr. Glass.—We have ten of our own elephants and the rest are buffalo contractors.

President.—Who does the cutting?

Mr. Glass.—We have felling contracts as well as dragging contracts. The timber is brought to our railway line and from there it is railed to the Mills.

President.—Do you find any rise in the cost of extraction during the last few years?

Mr. Glass.—Immediately after the war there was a rise; but it is fairly stabilised now.

President.—Do you find reasonable supply of labour for extraction?

Mr. Glass.—Labour is rather short. Men work for us during the off season and we find difficulty during the paddy planting and reaping seasons.

President.—Is it largely Burman labour?

Mr. Glass.—Almost entirely.

Dr. Matthai.—The extraction goes right through the area.

Mr. Glass.—It does in our forests.

President.—In your forests where you don't bring the logs by rail, do you do extraction all the year round?

Mr. Glass.—There is no extraction in the hot weather.

President.—No extraction goes on?

Mr. Glass.—In the hot weather, the elephants rest.

President.—I take it that in the forests on the Toungoo and Pynmana side there are no creeks.

Mr. Glass.—There are some.

President.—Can you float the logs?

Mr. Glass.—Yes, in certain districts.

President.—Does it pay you to rail them?

Mr. Glass.—The streams are so small that the Hardwoods if launched singly could not be floated out.

President.—So that you will always have to raft them?

Mr. Glass.—If we brought soft woods we could float them; otherwise not.

Mr. Mathias.—Have you any experience of planting?

Mr. Glass.—No.

Mr. Mathias.—It has done on a small scale recently by Government.

Mr. Glass.—That is so.

Mr. Mathias.—You will simply depend on regeneration in the case of your forests,

Mr. Glass.—We merely cut down the trees marked by Government. They mark in a cycle.

Mr. Mathias.—When you have completed cutting in one forest, you go to another.

Mr. Glass.—We work in a cycle and in the case of a fifteen year lease we take 15 years to cover the whole field.

Mr. Mathias.—You have a 15 year license.

Mr. Glass.—Yes.

Mr. Mathias.—The area that is leased to you is divided into 15 coupes, is that so?

Mr. Glass.—Yes; we work over all our leased area in 15 years.

Mr. Mathias.—You work one coupe a year, the idea being that at the end of 15 years the area will be ready for you to start again.

Mr. Glass.—Yes.

President.—15 years in the case of hardwoods would be a short period, would it not?

Mr. Glass.—It is a short period.

Mr. Mathias.—Your recent leases extend to 30 years, but the cycle is 30 years.

Mr. Glass.—No, but the cycle I believe is now 30 years. Our recent leases are some for 15, some for 10 years. There has been some reduction in the number of trees marked for extraction by Government.

Dr. Matthai.—Do they have a provision of a minimum girth of trees to be felled?

Mr. Glass.—Yes. We are felling Hardwoods down to 4' 6" breast high.

Dr. Matthai.—Don't they mark all the trees which you cut?

Mr. Glass.—In most areas they do.

Rate of growth of soft wood trees.

President.—In these forests I take it there will be a considerable percentage of soft woods along with the hardwoods?

Mr. Glass.—Yes.

President.—I suppose you have your own forest experts to advise you?

Mr. Glass.—I have.

President.—What I want to know is whether your firm or any other firm collect any data about the history of these various trees, that is how long they take to grow and things like that?

Mr. Glass.—No, we don't.

President.—There is a suggestion that Government should come forward for planting trees, but nobody seems to know with any certainty as to how long a particular tree takes to grow.

Mr. Glass.—Some of them may take up to 180 years to grow to maturity, it is very difficult for me to say, but the softer woods grow much faster. Mr. Robertson should be able to give you more information on the point.

President.—I think he gives 15 years as the period for the Bonmeza. Have you found Bonmeza in your forest?

Mr. Glass.—Not very much.

Mr. Mathias.—Is it used for any other purposes than matches?

Mr. Glass.—It is used to a small extent for packing cases.

Dr. Matthai.—Are any of these soft woods used for house building at all?

Mr. Glass.—To a very small extent.

President.—We were told by one of the forest officers that in these forests round about Pynmana there are quite a number of species of soft wood.

Mr. Glass.—That is so. I will give you a list of those which are commonly found in our forest.—

Letpan (*Bombax Malabaricum*).
 Gwe (*Spondias Mangifera*).
 Didu (*Bombax insigne*).
 Boumeza (*Albizia stipulata*).
 Thitpok (*Tetrameles nudiflora*).
 Thitpyauk (*Sapium insigne*).
 Leza (*Lagerstroemia tomentosa*).

President.—There are six varieties in your forest which are suitable for matches?

Mr. Glass.—Yes, at least.

President.—I suppose these trees are scattered more or less?

Mr. Glass.—Very scattered.

President.—Supposing plantation was undertaken and, say, six or seven species which actually grow in the forest scattered were selected, do you think there will be any difficulty in their growing in clusters?

Mr. Glass.—I don't think there should be much difficulty.

President.—The point I am trying to drive at is that it has been suggested that trees may grow in one part of the forest but may not grow in another.

Mr. Glass.—That is quite true; some trees prefer low land and some prefer high land.

President.—In the same forest area you find trees growing here and there all over the place and there does not seem to be any reason for its not growing in other places?

Mr. Glass.—Some of the forest areas are hilly and some are lowlying. Some trees prefer high land while others prefer low land and the soil varies.

President.—If they select six or seven species which have actually grown in a particular forest you don't think there will be any insuperable difficulty in plantation?

Mr. Glass.—I don't think so, from what I have heard of Government experiments, but concentration may lead to an increase of tree attacking pests.

President.—I take it that these trees, sawhya, gwe and so on, are ordinarily not used for building purposes?

Mr. Glass.—No, they are soft. They are not durable.

President.—The forest people treat them more as weeds?

Mr. Glass.—Yes.

President.—Even for fuel they would not be considered as good enough wood because they won't give you much heat, isn't that so?

Mr. Glass.—They might give heat but I don't think our trees could be cut for firewood at a marketable cost and other woods would probably give better calorific results.

President.—In the forest, I understand, they reserve certain quantities of wood for fuel purposes for the neighbouring population. These trees, I take it, would not ordinarily form part of the wood, would it?

Mr. Glass.—I think such trees are too big to be turned into fuel. I think that there is a rule that only trees which are regarded as unmarketable are cut down for fuel. The forest department, I think, specify certain fuel areas and say that certain trees can be used as fuel.

President.—Do they enumerate the trees?

Mr. Glass.—No, not in fuel reserves, so far as I know.

Dr. Matthai.—A fuel reserve is generally outside the reserve forest?

Mr. Glass.—Yes. They consist usually of scrub jungle. I don't think firewood is cut for any valuable trees.

Mr. Mathias.—Have they any system of passes for the extraction of fuel? If a villager wants to extract so much fuel wood he will get a pass for that, that is he will get so much free of royalty, is there any arrangement like that?

Mr. Glass.—I think so. I think agriculturists in the district obtain firewood free.

President.—In these areas what would be the average charge for extraction and taking it to the railhead or river head whatever it may be?

Mr. Glass.—I should think that the native contractors could extract logs from railside areas at Rs. 15 a ton, felling, dragging, floating or carting to the railway, everything except royalty included.

President.—What is the railway freight?

Mr. Glass.—Somewhere about Rs. 10 Pynmana to Rangoon.

President.—That makes Rs. 25.

Mr. Glass.—Then there is the royalty; loading on trucks Rs. 2 I should take it that small contractors in accessible areas paying a royalty of Rs. 5 should be able to get the timber to Rangoon within Rs. 35 to Rs. 40 including a reasonable profit.

Cost of plantations.

President.—An estimate has been given by Mr. Robertson* for planting. In your case, of course, for the more expensive classes of wood, Government will take as much as it reasonably can having regard to commercial conditions, but when Government undertakes plantation for a particular industry, then this is what happens. Mr. Robertson has taken—

	Rs.	A.	P.
Planting charge per acre for seven years	20	0	0
Supervision charge per acre " "	16	0	0
Compound interest for 15 years	10	0	0
	<u>46</u>	<u>0</u>	<u>0</u>

Then having got that he wants royalty of Rs. 8-8-0 of which Rs. 2-8-0 is said to be the cost and Rs. 6 is royalty, and he assumes that the yield per acre would be 20 tons of timber, so that Government will get on an investment of Rs. 46, Rs. 120. On 20 tons Government will get Rs. 2-8-0 for actual cost, in addition to that it claims a royalty of Rs. 6. That means Rs. 120 on one acre and that would go on for 15 years. Do you consider that a fair return or do you consider it excessive?

Mr. Glass.—I would not consider it excessive. When does he say you can cut the trees?

President.—In about 13 to 15 years Bonmeza will reach 5 ft. girth. How would you calculate this if you were planting? Suppose you own an acre of land from which at the end of 15 years you get Rs. 120; it would be considered a good investment if it is a paddy land, would it not? If you succeed it would be a regular business. Rs. 120 for 15 years, that means an average income of 8 per cent. after having paid all your costs. That I think would be a fair return for any capital?

Mr. Glass.—Yes, with security of tenure.

The making of splints in a separate factory situated in the forest.

President.—It has been suggested that it may be convenient to make the splints in the forest area and then send them down to different parts of the country.

* Mr. Robertson does not recollect having made this estimate.

Mr. Glass.—That seems to me to be a good idea.

President.—As regards that you have got to consider two things, first, whether you can keep the splints in sufficiently good condition before they are dipped; they may dry up or may get bent. Of course, as regards foreign splints there is evidence that they get the splints out and dip them here. But so far as Indian wood is concerned nobody knows as to how long it would keep because nobody has made any experiment yet. The other thing is would there be sufficient labour available for this kind of work for a big factory in the forest areas?

Mr. Glass.—Probably labour would have to be imported.

President.—Of course, in the splint making the veneers can be done by machinery. They would require chiefly manual labour.

Mr. Glass.—Can you give me some idea as to what labour they would require?

President.—Some sort of skilled labour.

Mr. Glass.—How many men would be required?

President.—I don't suppose they would not exceed 500 men.

Mr. Glass.—You would not get local labour on that scale.

President.—Most of them I think will have to be Indians at that stage so that there is the same problem as in any other industry in Burma, whether it is a rice mill or a timber mill or any other mill. You have got these saw mills; do you find any difficulty in getting Indian labour?

Mr. Glass.—We do not find great difficulty, but in the jungle there is always the labour problem.

Mr. Mathias.—Would not there be considerable extra expense in packing the splints and sending them to the main factory?

Mr. Glass.—I think it would probably be cheaper than having the logs rafted or railed down.

President.—It does seem to be a feasible proposition if done on a large scale?

Mr. Glass.—Can you give me an idea of what is the measurement of match-wood obtained from a 50 ft. log?

President.—I have been trying to find out what the waste is but nobody seems to know. What they say is this, that out of a ton of 50 cft. they make 156 gross of boxes, that is to say both veneer and splint, but that does not give us any idea of what that means.

Mr. Glass.—One way to get at it would be to measure the 165 gross boxes and then take the cubic contents.

President.—I suggested to them that the simplest way would be to get the weight. It is very difficult to get the measurement of splints; 50 cft. of wood may be very much more compressed than boxes. The only other thing that I could think of was to get them to weigh the log and weigh the splints. Until that is done it is very difficult to say what it is really.

Mr. Glass.—You will have to make a calculation such as that to get at the wastage.

President.—I told the applicants to give me some of these figures.

Mr. Glass.—I presume you told them to take the weight of the log also?

President.—Yes. It will have to be on a fairly large scale; unless it is done right through by machinery on a mass production basis it would not pay at all.

Mr. Glass.—That is so.

President.—Until that is done, it is very difficult to say whether it is really advantageous.

Mr. Glass.—You will require to make calculations as to that on a similar basis.

President.—I have told some of the applicants to give me those figures. It will have to be on a fairly large basis. Unless it is done right through on a mass production basis, it won't pay at all.

Mr. Glass.—Quite so.

Exportation of match wood to India.

Mr. Mathias.—In the circumstances of the timber trade, would it be feasible for big firms such as yours to extract match wood on a large scale and export to India?

Mr. Glass.—I don't think so.

Mr. Mathias.—Owing to the difficulty of keeping wood fresh.

Mr. Glass.—Yes and also to the high cost of extraction.

Mr. Mathias.—Roughly per ton what would be considered sufficient to cover the cost of extraction?

Mr. Glass.—We could deliver the logs in Rangoon at Rs. 46.

Mr. Mathias.—And in Calcutta what will it be?

Mr. Glass.—It depends on what is charged for freight to take logs across.*

President.—Even then supposing it is Rs. 70 in Calcutta it would be so very difficult to arrange fresh wood that unless you accept petty contractors it would not be worth your while to take up extraction on a large scale for export.

Mr. Glass.—I don't think we can, considering market prices.

Dr. Matthai.—If, for example, the total demand from India on Burma comes to 100,000 tons, is it likely to make the business worth while?

Mr. Glass.—It would, if they offered us a price to cover our cost of extraction and a reasonable profit.

Dr. Matthai.—As regards Toungoo and Pynmana Division, where do you think that the splint factory ought to be supposing we found that these forests had a reasonable supply of these woods?

Mr. Glass.—I should say somewhere on the railway line.

Dr. Matthai.—Somewhere between Toungoo and Pynmana.

Mr. Glass.—Yes, or wherever else the Government considered suitable.

President.—What would be the longest distance the logs would have to go from the forest? Would it be 20 miles?

Mr. Glass.—The people working small concessions would probably be 4 to 5 miles from the railway line. When you want a big quantity like 100,000 tons a year these sources are soon exhausted.

President.—Government have not constructed any railways in the forest.

Mr. Glass.—Not to my knowledge.

President.—How do you run your railway system? Does it go right through or how do you bring it to the railway line?

Mr. Glass.—Logs are brought to our railway by means of buffaloes and our line runs from forest to Mill.

President.—Then for what distance would they have to be dragged?

Mr. Glass.—Up to 2 miles.

President.—You have got feeder lines.

Mr. Glass.—Yes.

President.—You just put the feeder lines as you go along.

Mr. Glass.—Yes.

President.—It is not such a big proposition as to make it remunerative for any man to build his own railway in the forest.

* *Vide Statement, dated the 24th March, 1927.*

Mr. Glass.—Laying a railway is a very expensive business. The price obtainable for Burma match woods is low yet they can actually import wood from Sweden.

Mr. Mathias.—But the Swedish cost is Rs. 120.

Mr. Glass.—You are talking about splints.

Mr. Mathias.—No, in the log.

President.—At present they get their log to the factory at Rs. 35 to Rs. 40, whereas the foreign log is about Rs. 150.

Mr. Glass.—The freight on round timber is much greater than on converted timber. We can get our supplies of foreign wood cut to candle box sizes very much cheaper than that c.i.f. Rangoon.

President.—Where does it come from?

Mr. Glass.—From Sweden. It seems to me a very high figure for such logs.

Mr. Mathias.—What kind of wood do you import?

Mr. Glass.—Pine.

Mr. Mathias.—For what?

Mr. Glass.—For candle boxes.

Dr. Matthai.—Can you tell me what is the freight on timber from here to Bombay?

Mr. Glass.—Rs. 22-8-0 per ton at the moment.

President.—I suppose you export your wood to all parts of India, Calcutta, Bombay and Madras. Could you give us freight rates afterwards?

Mr. Glass.—Yes, freight rates to the principal Indian ports.

Mr. Mathias.—If you could get say about Rs. 70 a ton for these match woods in Bombay and Calcutta, it would be a good proposition if the freight is only Rs. 22-8-0 to Bombay.

Mr. Glass.—That is on converted timber. It would be very much more for logs.

President.—What you want to know is the freight on round logs.

Mr. Glass.—Yes, I shall supply.

President.—Your firm does not do any business in matches.

Mr. Glass.—No.

President.—Which is the principal firm that does it? Binning & Co. used to do before.

Mr. Glass.—I cannot tell you.

President.—We have asked the Chamber of Commerce to come and give evidence. We have not heard from them. I think they would be able to give us information on that point.

Mr. Glass.—I should think so.

Extraction.

President.—Do you know Paunglin and Mahuya reserves?

Mr. Glass.—I don't know them.

President.—Are they in Insein Division?

Mr. Glass.—Yes, I believe so.

President.—We were told that in forests like Okkan and Tharrawaddy there are creeks running right through and the longest distance they would have to drag the logs before getting to water would be a mile or so. Is that your experience as regards some of these forests? Are there forests like that?

Mr. Glass.—Yes.

President.—These people say that they manage to get it through the smaller creeks into the bigger stream during the rains.

Mr. Glass.—Mr. Robertson will perhaps be able to tell you more about it. I have little experience.

President.—I take it the harder woods can remain in water longer without being spoiled.

Mr. Glass.—Yes, by their very nature.

President.—The softer woods however rot very quickly.

Mr. Glass.—Yes.

President.—Is it due to the insects or is it due to the fibre?

Mr. Glass.—Partly due to insects and partly due to the very perishable nature of the timbers.

President.—Do you apply anything to prevent the wood from drying?

Mr. Glass.—No.

President.—We were told that there was some application which would prevent the logs from being dried up.

Mr. Glass.—I don't know of any.

Mr. Mathias.—So that the sap does not get evaporated.

Mr. Glass.—I have not seen it done.

President.—When you apply for a concession, you have to tender.

Mr. Glass.—Yes.

President.—Have you found that it is a very satisfactory method of securing a concession?

Mr. Glass.—It seems to me to be the only fair way.

President.—Would it be possible for the Government supposing they went in for plantation to have a flat rate for particular species of wood? Of course, there may be a charge of favouritism levelled against Government.

Mr. Glass.—I think so.

President.—It is a very common complaint and for that reason you suggest that the tender system is the best.

Mr. Glass.—It seems to me to be the only fair method looking into present conditions. The Government, however, do not bind themselves to accept the highest or any tender.

President.—Sometimes they refuse the highest tender.

Mr. Glass.—Yes.

President.—Mr. Adamjee offered to pay a royalty of Rs. 12-8-0 which was never done before.

Mr. Glass.—It does seem a high rate.

President.—Rs. 5 to Rs. 6 would be considered a fair rate for that sort of wood.

Mr. Glass.—The farther you get into the forests your charges for transport become more costly.

President.—In floating logs is there a scramble due to the different contractors working the small streams?

Mr. Glass.—I should not think so. The logs are all marked.

President.—But in the narrower streams supposing you were extracting on a large scale and another small man comes there, cuts a tree and floats the same?

Mr. Glass.—There would be difficulties.

President.—Have cases arisen like that?

Mr. Glass.—Not so far as I know.

President.—We were told here that in these forests, if two or three men were extracting, then it may happen that one man blocks the streams altogether and another man may not get a chance for months together.

Mr. Glass.—That is the difficulty in the case of small streams. If you put in more timber than the stream can float out, there would be difficulties.

Dr. Matthai.—Wood like teakwood takes up a lot of space.

Mr. Glass.—Only when it reaches, and is rafted in the main stream.

Dr. Matthai.—I mean the rafting arrangements.

When it goes to the main stream, rafting would be twice as big as the wood itself.

Mr. Glass.—Less space is taken up by teak than other Hardwoods such as Eng or Pyinkado when rafted.

President.—Do the logs float by themselves? Do they have to take care of themselves?

Mr. Glass.—The elephants go down the small streams, break up dykes and push stranded logs back into the stream.

Mr. Mathias.—How long does it take for the soft woods to rot in water?

Mr. Glass.—I have no experience. Mr. Robertson will probably be able to give you some information. I know that logs deteriorate very rapidly in the dry forests.

Supervision by the Forest Department.

President.—Are the conditions in the forest concessions reasonably enforced or is there any trouble as regards penalties, etc.? What is your experience?

Mr. Glass.—I think Government are very reasonable. Everything is done in a businesslike manner.

President.—Do you experience any great delay in the Government Officers measuring the timber?

Mr. Glass.—No.

President.—You generally get it done at the proper time.

Mr. Glass.—Yes.

President.—In this class of wood if there is any long delay it would be prejudicial whereas in your case it would not be so. What is your experience? Do you generally get the man for measuring?

Mr. Glass.—Yes.

President.—There is no delay at the measuring station?

Mr. Glass.—No.

President.—Is it your experience here that sometimes a man gets a contract from Government and transfers it to somebody else?

Mr. Glass.—Some contracts provide for this and some don't. You cannot transfer your rights without the permission of Government.

President.—Have you come across any case where a Burman who goes and gets a concession which he is unable to work transfers it to you or somebody else?

Mr. Glass.—I have not heard of any.

President.—Do Government raise any difficulty as regards transfers?

Mr. Glass.—I don't know. I have no experience.

President.—You say that in some contracts they don't put in that condition as regards transfer.

Mr. Glass.—I think it is possibly put in all the contracts.

President.—In your case the question may not arise.

Mr. Glass.—Possibly not.

President.—What I wish to know is have you actually purchased any rights from any other licensee?

Mr. Glass.—Yes.

President.—Then you have taken the consent of the Government.

Mr. Glass.—Yes.

President.—Do Government make enquiries or is it a formal matter?

Mr. Glass.—It is not a formal matter.

President.—What sort of enquiries do they make?

Mr. Glass.—I don't know.

President.—In this enquiry that is rather a point of importance as to whether any third party can really work the forest taken in the name of another person altogether. That is why I am asking you whether the Government can really get at the real person working the forest apart from the name of the man in whose name the concession is taken.

Mr. Glass.—They are bound to know the man working.

Mr. Mathias.—What is to prevent a man from taking a coupe in his own name and apparently working it for somebody else? Government would not be able to ascertain that the contract has been transferred, because the contract would remain in the man's name.

Mr. Glass.—Once a lessee pays his royalty Government have no further claim on the timber and the lessee can do what he likes with his logs.

President.—The royalty is paid after extraction.

Mr. Glass.—It is ordinarily on hardwoods paid at the stump.

President.—It has to be measured.

Mr. Glass.—Yes.

President.—That would be done at the measuring station.

Mr. Glass.—It is done at the stump also.

Mr. Mathias.—So long as the contractor remains responsible to Government for the payment of royalty, that is all that Government look to.

Mr. Glass.—Government merely says that the royalty must be paid. After payment, they have no control over the disposal of the timber.

President.—You don't purchase any timber from other contractors?

Mr. Glass.—Yes, we do.

President.—Are they usually reliable as regards supplies?

Mr. Glass.—They might be better at times.

President.—In this case, the industry has to depend on contractors. It is a point of great importance whether they are able to supply wood. Have you found much difficulty?

Mr. Glass.—There is always difficulty.

President.—Is it due to difficulty in delay or what?

Mr. Glass.—Chiefly delay in delivery.

President.—These are ordinarily Burmese contractors, I take it.

Mr. Glass.—Yes.

FOREST DEPARTMENT, BURMA.

Evidence of Messrs. H. W. A. WATSON, Chief Conservator of Forests and W. A. ROBERTSON, Conservator, Utilisation Circle recorded at Rangoon on Saturday, the 26th March, 1927.

Introductory.

President.—Mr. Watson, you are the Chief Conservator of Forests.

Mr. Watson.—Yes.

President.—Mr. Robertson, you are the Conservator of Forests, Utilisation Circle.

Mr. Robertson.—Yes.

President.—What does 'Utilisation Circle' mean?

Mr. Watson.—It deals with departmental extraction and timber research.

Mr. Mathias.—Is the Conservator doing the same work in other Provinces?

Mr. Robertson.—Yes.

Dr. Matthai.—Are the sales organised by you?

Mr. Robertson.—Yes, those held in Rangoon, but the upcountry sales are dealt with by the people on the spot.

President.—The forests in Burma are a transferred subject.

Mr. Watson.—Yes.

President.—I wish to know the relation between the Commercial department of the Government or the Industrial department of the Government and the forests. Are they under the same Ministry?

— *Mr. Watson.*—Yes.

President.—I suppose you have not got a Director of Industries, but you have got a Development Commissioner.

Mr. Watson.—Yes.

President.—If it is a question of establishing an industry—take the match industry for instance—there are two aspects to that question, one is purely the forest aspect and the other is the industrial or the commercial aspect.

Mr. Watson.—Both come under the same Minister.

President.—That is what I wish to know. It is rather fortunate that there is no overlapping.

Mr. Watson.—No.

President.—At present we have not found it necessary to examine the Development Commissioner, but at a later stage when we formulate some sort of idea as to how the enquiry is going on, it may be necessary to examine the Development Commissioner.

Mr. Mathias.—Has the Forest Department any relation with the Development Commissioner?

Mr. Watson.—The Development Commissioner deals with Excise, Mines and I think Industries, but I am not absolutely certain.

Mr. Robertson.—He deals with Factories, Co-operative Societies, etc.

Mr. Mathias.—In some respects the Development Commissioner corresponds to the Director of Industries in other provinces.

Mr. Watson.—Yes.

Forest Research.

President.—Now as regards research, what arrangements have you here in this department?

Mr. Watson.—Research in Sylviculture, Botany, Zoology—so far as concerns the growth of trees under the Conservator of Forests, Working plans who is stationed at Maymyo, and the research concerned with the economic products is under the control of the Utilisation Circle.

President.—There is a branch which deals with the economic aspects of forestry.

Mr. Watson.—Yes.

President.—Do you experiment with wood for industrial purposes?

Mr. Watson.—Yes, we have got experimental workshops for that.

President.—For instance would it be part of your work to examine the different kinds of wood for the manufacture of matches?

Mr. Robertson.—Yes, but that happens to be a particularly specialised investigation. In our experimental workshops we only carry out the work that is really of immediate local interest, that is the applied research work. The scientific research part is done in Dehra Dun. These are two aspects of the work. The scientific research which is of general interest to the whole empire is done at Dehra Dun, but there are certain branches which are not economical to carry out there and which we do here.

President.—If a man was in search of a particular wood for a particular industry and he wanted to be satisfied whether that was suitable for that purpose, he would have to go to Dehra Dun.

Mr. Robertson.—He would probably come to me first and ask me if I had any information on the subject. If I had enough for his purpose he would stop there, but probably I should not have enough. In that case I should send the problem on to Dehra Dun.

President.—They would then experiment with the wood there.

Mr. Robertson.—They do timber testing which requires a large technical staff. It is therefore much cheaper to concentrate it there, but certain branches like the seasoning of timber the actual making up of a timber to make it suitable for particular purpose are much more economically done here. So we have divided the work in that way.

Mr. Mathias.—In the case of matches, would not that be a matter which would be investigated locally, in regard to a number of points such as whether wood is absorbent of wax, whether it would break, etc.?

Mr. Robertson.—That is much more in the timber testing line. The testing of absorbency is much more of a laboratory job than a workshop job. If they reported well on the wood, then we would try it actually on the spot. Very often we tackle a problem that way.

Dr. Matthai.—Are you speaking of Dehra Dun?

Mr. Robertson.—Yes. I send the timber over there. They do purely the laboratory test at Dehra Dun and then I carry out the actual applied tests here.

President.—They carry out one or two applied tests also. For instance in the case of bamboo they have a pulp making plant.

Mr. Robertson.—It is an expensive plant for the quantities used. It is more economical to send the raw material over there than to have a plant here, because in the latter case it would be working only quarter time.

Mr. Mathias.—The scientific test does not imply that that particular wood would be a commercial success.

Mr. Robertson.—By no means but it gives a very good indication. If Dehra Dun say that *primâ facie* a timber is suitable, we work it out here on the spot in conjunction with the match factory owners or anybody else who wants it. For instance, people have applied to me for timber for sucker rods. We had strength tests made at Dehra Dun, and on their reporting that it was strong enough we made up rods and had them tested in the wells.

President.—So far as matches are concerned, I take it that experiments have been purely local.

Mr. Robertson.—Yes, the only person who has done any serious work in experimenting is Mr. Adamjee Hajee Dawood.

Mr. Mathias.—Have you had any request from the Swedish combine to test the wood for the purpose of match making?

Mr. Robertson.—None at all.

President.—In this enquiry we are going into the question of the Swedish Match Company and it is important that nothing should be done which might prejudice the enquiry so far as Government is concerned about concessions or anything else at present, because we don't know what the result of the enquiry might be, but the point is that no difficulties should be created in the interval.

Mr. Robertson.—There is no such thing as a concession in Burma. Any allotment of land or right to work the forest is by tender.

Area of forests in Burma.

President.—What is the total area of the forests in Burma?

Mr. Watson.—I cannot tell you because these statistics have been vitiated. I think it will be about 30,000 sq. miles.

President.—I am not pinning you down to any figures. You can make any modifications you like. The point I want to bring out is that Burma has extensive forests.

Mr. Watson.—Yes.

President.—I am now talking of the reserve forests.

Mr. Watson.—In future I am going to include Federated Shan States.

President.—We may take it then so far as the reserve forests are concerned, it would be about 30,000 sq. miles.

Mr. Watson.—Yes, including the Federated Shan States.

Dr. Matthai.—What is the figure for Shan States?

Mr. Watson.—The figures are 28,500 square miles in Burma and about 2,000 square miles in Shan States.

Dr. Matthai.—The classified forests are not much bigger.

Mr. Watson.—The unclassified forest between Burma and Federated Shan States is about 150,000 square miles.

President.—For these purposes, I think it is just as well to exclude the unclassified forests.

Mr. Robertson.—I think we will have to. Of course I think they will be a source of supply for some years.

President.—You cannot calculate what it means.

Mr. Robertson.—There is no means as regards that.

President.—You can simply say that there may be a certain quantity available, the quantity being unknown.

Mr. Watson.—There are large areas which have not yet been tapped.

President.—In Lower Burma how many circles are there?

Mr. Robertson.—Lower Burma is divided into four circles.

President.—I take it the nearest from Rangoon would be the Hlaing Circle.

Mr. Robertson.—Yes.

President.—Sittang Circle is another.

Mr. Robertson.—There is one circle on each side of the Pegu Yoma. Then there is the Tenasserim Circle for Moulmein and there is the Delta Circle.

President.—Are there any forests which may be called ever green forests?

Mr. Robertson.—Yes, there are stretches of ever-green forests.

President.—I understood that the Insein Division has large areas of over-green forests,

Mr. Robertson.—Yes.

President.—Those would be the areas in which the conditions for this class of wood would be favourable.

Mr. Robertson.—Yes, but as far as woods useful for making matches are concerned, I am not certain whether there are not more in the deciduous forests. You have only got .3 of a ton per acre in the Insein forests according to statistics whereas in Mergui and Pinyinana in the drier forests there are the same species yielding .6 of a ton per acre.

President.—That is as regards natural growth. Supposing you were to plant, would it not pay?

Plantations.

Mr. Robertson.—I should find it impossible to say which would be the better forest for these species. I should think the Bombax species are probably the easier to plant in a dry area, but I am not certain about that.

President.—So far as the Burma wood is concerned Bombax is not the best wood.

Mr. Robertson.—No.

President.—As regards India, it is. The researches up till now so far as they have been done are confined to this Bombax, but I think so far as the Burma evidence shows, it is not a good wood for splints at any rate.

Mr. Robertson.—Quite so.

Mr. Watson.—There are only a few species—about five—that these people definitely accept.

President.—It is better for me to tell you that there are about 10 species which have been approved by Adamjee's to be good.

Mr. Robertson.—In that list which was published all the scientific names are entirely wrong.

President.—I should like you to correct these names (handed the list).

Mr. Robertson.—Yes.

Dr. Matthai.—Do they have different botanical names?

Mr. Watson.—They don't have different botanical names. They have only different local vernacular names.

President.—I have drawn Adamjee's attention to the fact that they have already got these ten species and it is no use their saying that there are many other varieties available unless they get something else which is far superior to any of these ten species already tried.

Mr. Robertson.—They are probably right on the species. It is very much a matter of spotting the winner.

Mr. Mathias.—The probability is rather against any better species being found.

Mr. Watson.—You can't say that. Some of the forests have not been tapped at all. The forest down on the Tenasserim side which is entirely different from the ever-green in Insein has not been tapped.

Mr. Mathias.—The present ones are those that they have tried and they are the ones that they ought to stick to.

Mr. Watson.—Yes, so long as they can get them.

President.—As far as communication is concerned, which circle do you recommend as the most suitable?

Mr. Watson.—Hlaing on the west side of the Yoma. Extraction is only possible in the north of Toungoo.

President.—Pinyinana and Toungoo are on the same line.

Mr. Robertson.—They march on each other.

President.—Who are the officers in charge of those forests?

Mr. Watson.—The Conservator of Forests, Hlaing Circle, is Mr. Barrington and the Conservator of Forests, Sittang Circle is Mr. Collings.

President.—Sittang is in the Tenasserim Circle, is it not?

Mr. Watson.—It is in another circle. As regards planting, I think that if we did experimental planting we should begin with Insein but there is another factor involved which may knock out Insein, *viz.*, we would have to consider the suitability of the soil, the supply of labour and the possibilities of getting suitable land outside reserve forests which would apply especially to areas along the Irrawaddy above Mandalay.

President.—I was thinking of the Hlaing Circle. Let us take that Circle because it contains 1,300,000 acres of reserve forests.

Mr. Watson.—Most of that is inaccessible.

President.—The Insein Division itself is about 331,000 acres.

Mr. Watson.—Yes.

President.—The area required would be very big.

Mr. Watson.—The thing is that it will have to be accessible that is the main point. Whilst it would not be very big, it is impossible to get it in other than patches.

President.—Just now?

Mr. Watson.—Not only now but at any time. It cannot be done. The soil does not allow it. We can only plant on the valleys.

Dr. Matthai.—Is it a hilly area?

Mr. Watson.—Yes, all the forests of Burma are hilly. I doubt whether it would be an economic proposition to try and plant there.

Mr. Mathias.—Does that apply to all species, even to matchwood.

Mr. Watson.—I believe it applies to all species. I know that our experience has been that when we get on to poorer soil, the growth is slow and stunted.

Mr. Mathias.—What is the total area of the Paunglin and Mahuya reserves?

Mr. Watson.—I cannot tell you off-hand.

President.—I understand that the Okkan reserve is fairly suitable.

Mr. Watson.—It would not pay them to work so far away. If they work at all, they would have to depend on carting rather than floating.

Mr. Robertson.—They could not float the timber from Okkan because it would deteriorate.

President.—They will have to drag it out of the forest.

Mr. Watson.—If they were working in that area, they would have a cart road up to the railway head. The shorter the track the cheaper will be the cost of extraction.

Mr. Robertson.—The railway line runs fairly close. I think that in the Okkan Reserve they have only to do 10 miles by the cart road to reach the railway line.

President.—That is not very much.

Mr. Watson.—No.

President.—I wish to know whether sufficient area would be available in that part of the country (shewn the map).

Mr. Watson.—Yes, but the whole thing would have to be examined because there are other interests involved in this.

President.—Taking the whole of India's requirements, it would come to about 120,000 tons. Of course if the business develops, it would be more. For that you require how much land?

Mr. Watson.—100,000 acres of suitable soil, which would have to be spread over 300,000 acres of reserve forest. I assume that in no forest more than 30 per cent. is suitable for planting.

President.—That area is a good deal more than that.

Mr. Watson.—Yes.

President.—What I am trying to suggest is that if you can produce the whole of that quantity in this area, it is no use tying yourself up to Pynmana.

Mr. Watson.—It would involve a thorough examination and I think it is better to attempt at three centres, because if you had a centre at S..... you would have to go up and if you moved up there, it would come to about 30 miles. The carting would have to be over a longer distance and consequently the cost of extraction would be more.

Mr. Mathias.—There will be streams in that part of the country.

Mr. Watson.—They are of no use.

President.—In the area which is now being worked by Adamjee he says that so far as the wet months are concerned, he has only to drag for about a mile to the water head and from there it comes down by water. As regards the dry season I think he has to cart it to Hleghu. If you selected that area, it would be merely a question of connecting this up by road or a light railway.

Mr. Watson.—That would be about 20 or 30 miles.

President.—We have not got any data. We should like you as far as possible to give us such information as you can.

Mr. Watson.—We could give you no reliable information unless we had a man on special duty to examine the whole thing for over a year. Even then he would not be able to give you any information about the cost of planting. He could only tell you the suitable areas where planting could be done.

President.—In the meanwhile we have to consider the question whether, pending any special measures, you would have sufficient supply available in all the different forests.

Mr. Watson.—I think that there would be a sufficient supply to keep them going for the next 10 or possibly even 20 years.

Dr. Matthai.—That is between 15,000 to 20,000 tons a year. Do you think they will be able to get that for 10 or 20 years?

Mr. Watson.—I should think so.

Dr. Matthai.—What they do now this. They have got about 3,700 tons from their forest reserve, and they got about 1,700 tons from the Andamans and the rest in small quantities from all over Burma.

Mr. Watson.—When I say they would be able to get it, I mean their being able to buy it from all over Burma instead of depending on their reserves. I do not say for one moment that it will be easy to get it although. I think the potential supply of Burma would be within that.

Mr. Mathias.—Then you see no possibility of Burma supplying India? As the President pointed out to you just now, the total requirements for India and Burma are 100,000 tons

Mr. Watson.—Without planting we cannot do it.

Mr. Mathias.—I mean when you have planted?

Mr. Watson.—It depends entirely on the areas we can put under plantation.

Mr. Mathias.—Would it be an economical proposition?

Mr. Watson.—I don't think it will be nearly as economical as in the case of teak.

Mr. Mathias.—Supposing it fetches Rs. 50 or 60 a ton more in Calcutta?

Mr. Robertson.—The freight to Calcutta amounts to Rs. 53 a ton.

Mr. Mathias.—So that you will have to supply f.o.b. at somewhere about Rs. 33 to Rs. 35?

Mr. Watson.—You are roughly asking us to put under plantation what we are at present doing, namely 4,000 acres a year. That is roughly the acreage planted in Burma, and it is very very rash to rush a plantation. It may be entirely wiped out by insects.

Mr. Mathias.—Are these particular trees more liable to insect attack than hard trees?

Mr. Watson.—One never knows what is going to happen when you plant trees under artificial conditions as we find in the case of teak in our teak plantations. Many of the trees are useless.

Mr. Mathias.—Would it be necessary to adopt a clear felling system? Would it be possible instead of planting to extract the hard wood in those areas in which match wood grows satisfactorily and then allow the match wood to propagate by natural regeneration?

Mr. Watson.—We do not always cut them off. We keep them.....

Mr. Mathias.—Even if you clear off everything else?

Mr. Watson.—It will be a very slow process if you clear off everything and just leave the matchwood, I don't think you would get any match wood at all. You won't have full regeneration.

Mr. Mathias.—What I was suggesting was this, that after a contractor had extracted the match wood available in a particular coupe, Government would then work that coupe departmentally and extract the other wood.

Mr. Watson.—That is what happens now in the Insein area. The contractors cut and take out everything.

Mr. Mathias.—Not only trees of fellable girth but also small trees?

Mr. Robertson.—We do not allow them to cut below 3 feet. If we did that they would probably clear the whole thing out, and other species which are not suitable for matchwood would grow there.

Mr. Watson.—I saw an area in the Insein division the other day where they had done something like that, and though there was no bamboo in the forest, it has got bamboo all over there now.

President.—In these two circles, Sittang circle and Hlaing circle, you have got between the two nearly 4 million acres?

Mr. Watson.—But most of it is inaccessible to anything but teak.

President.—It does not seem to me that there will be much difficulty in finding 100,000 acres of suitable land for matchwood out of 4 million acres.

Mr. Watson.—The first thing we have got to consider is that the acreage has already got a growth of timber which is of market value, and we at present plant roughly 4,500 acres in the two circles. Our planting operations are frequently delayed because the contractors will not go ahead with the extraction of the trees in those 4,000 acres.

President.—Supposing you selected the Insein division, would it not be feasible to get as much clearing done as possible in that area and go on with the planting?

Mr. Watson.—Insein division has not got the factors necessary to get the clearing done or even all the factors necessary to get the planting done.

President.—That is to say planting labour is not available?

Mr. Watson.—That is so, or if it available, it is very scanty.

Dr. Matthai.—You mean you have not got people to do the work in the forest areas. If you do plantation work where would you get your labour from?

Mr. Watson.—We get our labour from shifting cultivators. They put in the plants at the same time as they are sowing their crops.

Dr. Matthai.—You have that difficulty in Insein?

Mr. Watson.—Yes, and that makes planting an uneconomic proposition.

Mr. Mathias.—Have you any system of establishing forest villages for the supply of labour?

Mr. Watson.—We have not succeeded in getting villagers to move from their own districts.

Mr. Robertson.—In most cases there is a big demand for local labour on the spot.

Mr. Watson.—It sometimes happens that we do get together a forest village. They carry on the work for sometime, but as soon as they are a little better off, they clear off and go to some other place.

Mr. Mathias.—Have you not got any aboriginal tribes near your forests?

Mr. Watson.—We have aboriginal tribes in the forests, but they won't work. We get the work done by the Burmans living on the edge of the forests. The average Burman will not work; he will not even plant on rare occasions.

Dr. Matthai.—The people who practise shifting cultivation are generally Burmans, they are not Indians, are they?

Mr. Watson.—None except those on the Arracan border. Of the people that practise shifting cultivation there are probably very few are Burmans; they are all hill tribes up in the north and down south they are Karens. In the Pegu Yomas I think we have about 1,000 square miles in the hands of these people who carry on shifting cultivation, and none of these people will plant. I think there is a population of about 1,500 people in the Pegu Yomas and none of them will do any work.

President.—I think it is a thing worth looking into from the forest point of view.

Mr. Watson.—My point is that it is a thing which will have to be very carefully examined.

President.—After all it is a comparatively small area compared to what you have got.

Mr. Watson.—We have with the greatest difficulty worked up to planting 4,000 acres a year and I should think it would be a very very risky operation to go in for plantation on a larger scale without extensive experiments.

Mr. Robertson.—If you want to double your areas fairly rapidly you have to go in for imported labour and I very much doubt if you could grow the stuff at a profit.

Mr. Watson.—It depends entirely on the cost of planting. I tried to work it out the other day. It depends entirely on the financial cost of planting and the period it takes to develop a plantation.

President.—Just now there is a good deal of evidence to suggest that this match making wood is getting exhausted in most parts and therefore, as I said, from our point of view it is a very big proposition in this sense that to-day, for instance, Sweden has to import from Siberia and other places and they have paid as much as Rs. 120 a ton. Up to now they have not looked upon Indian wood because the idea has been that that wood is not suitable for making matches. But if the quality of the Indian wood is established it means a tremendous amount of business for Burma, and it is for that reason that we are very anxious that the forest authorities should examine the question. I have given you India's demand, but that is not the limit of the market.

Mr. Watson.—I think it would be a very sound thing to examine the question, but it would be a very unsound thing to rush into plantation without making experiments and getting sufficient proof behind it.

President.—That goes without saying, but we should like to see in what way we could make our proposals so that it may become easier for the forest authorities to carry on the experiments.

Mr. Watson.—I think the proposal should be that the forest department should examine the possibility of finding out suitable areas for planting matchwood inside the reserve forests and also the question of taking suitable lands on the banks of the rivers.

President.—We thought you found the soil suitable?

Mr. Watson.—I mean the whole question of taking lands outside the reserves.

Mr. Mathias.—Are the lands on the river banks suitable for other trees besides letpan?—For instance sawbya?

Mr. Watson.—We do not know anything about it.

Mr. Robertson.—That is a pure ever-green type. Naturally it will grow on the hills, where the forest is of ever-green type.

Mr. Mathias.—It is a matter of some importance as regards the Insein Division, because as Mr. Watson was saying, the area on which letpan would grow is limited. If we found that sawbya would grow on the hills, that would increase your output.

Mr. Robertson.—That is just so long as you can keep the evergreen type growing. But when you start planting, with clear cutting and burning, you very often find another type coming in and if you don't restore it to the every-green condition everything will be spoiled.

President.—That type may or may not suit the match people?

Mr. Watson.—That is so.

President.—Do I understand you to mean then that if you undertake planting, it might prove after 5 or 10 years when your tree is growing up, entirely unsuited for match making.

Mr. Robertson.—You take a case of a tree that regenerates itself normally in real ever-green conditions. If you start clear felling and burning, by exposing those trees to strong sunlight and dry air, instead of the steady and moist condition in which they naturally grow, you may find that it would refuse to grow at all.

Dr. Matthai.—And different species might take its place altogether?

Mr. Robertson.—Yes; perfectly worthless species might come in and you may have to destroy them as weeds. The match-wood may get along but they would not grow as they would in their natural condition.

Mr. Mathias.—As regards maulettanshe does it grow along the river banks? And what about didu?

Mr. Robertson.—They grow on the hills.

Mr. Mathias.—And gwe?

Mr. Robertson.—That is pretty well scattered all over. I do not think we have gwe on river banks.

President.—What about bonmeza?

Mr. Robertson.—They will grow anywhere.

President.—That is said to be the best because it is suitable for all the things, splints, veneers and so on.

Mr. Mathias.—So that riverain portions will have three species of match wood—bonmeza, letpan and maulettanshe?

Mr. Robertson.—Maulettanshe you will find in the deciduous forest not so much in the pure ever-green. You do find a certain amount in the alluvium banks in the valleys; you sometimes find a very good crop coming up, but often only in patches of half an acre or so.

Available supplies of match wood trees.

President.—Would it be possible for you to give us a very rough calculation as to the present available sources of supply in the province of the various woods suitable for match making? You have made enumerations in the Insein division. Would it be possible for you to take a certain number of compartments and calculate on some sort of rough basis for other forests?

Mr. Robertson.—The Insein enumerations were based on the result of a working party having worked there for a whole year. They were looking into species other than matchwoods. I have got some results for part of Mergui and part of Pynmana. These species were scattered through the forests all over Burma. The tonnage per acre will rarely reach one ton and will average $\frac{1}{2}$ to $\frac{3}{4}$ of a ton. In the ever-green we had certain other species of match woods and we got .3 ton an acre altogether.

President.—That is 112,000 tons are available at the present moment.

Mr. Robertson.—Yes, if you can get it, but in the greater part of the forests it won't pay anybody to extract.

President.—We are very anxious first of all—apart from the question of the industry—the possibility of the Burma forests should be ascertained. For that reason it is very important just now to ascertain roughly what supply is available in the accessible forests at a particular price say Rs. 35 or Rs. 40 delivered in Rangoon. Can you give us a rough calculation?

Mr. Watson.—I could not. I don't think anybody could.

Mr. Robertson.—You have got to start off by taking your reserves and working out what is accessible to even the roughest cart tracks. That is the limit of accessibility. After you have marked off that area, you have got to sort out again the areas in which these species grow at all. If you check this on the map, you find yourself cut down to 40,000 acres within the accessible limit. You have then got to find out the patches of forests where no match wood grows at all, and deduct them, otherwise you would get misleading figures.

President.—You have got now more or less the rough calculations of 4 areas.

Mr. Robertson.—Those are simply working plan figures. They don't take into account the question of accessibility. If you say two thirds of the area are inaccessible, it doesn't mean that the remaining one third will still have the same proportion of matchwoods as the whole area. It may be an entirely different type of forest where different species grow.

Mr. Mathias.—May I ask whether you have any plans to develop communications within the next 10 years?

Mr. Robertson.—Each division has a road plan. But we have not been able to do very much in the way of road work.

Mr. Mathias.—What I mean is that under the Government borrowing rules provided the work is productive, Government can borrow for it. Has any scheme been drawn up by the forests showing that on the construction of such and such a road the improvement would result in such and such a better price being obtained for timber? Has any programme been drawn on those lines for borrowing with a view to improve the communications of the Forests Department?

Mr. Robertson.—We have a road programme for the province and we have no difficulty in getting funds for it. But we are beginning with no roads, so we have to proceed slowly.

Mr. Mathias.—The order in which you are constructing your roads will be according to the increase in the value of forest produce which you will get.

Mr. Robertson.—Yes.

Mr. Mathias.—That is to say the roads that would give you the best return will be constructed first.

Mr. Robertson.—Yes.

Mr. Mathias.—I understand there is no difficulty about funds at all.

Mr. Robertson.—No.

Mr. Mathias.—Because your programme is a limited one.

Mr. Robertson.—Our trouble at present is the shortage of men.

Mr. Mathias.—You have no scheme for a system of forest tramways.

Mr. Robertson.—It won't be worth while doing, because taking our stock of available timber, the stuff worth taking to a saw mill would not be more than 6 to 7 tons in the acre. I estimate that for the construction of a tramway, it would be necessary that we should get 20 tons an acre.

President.—These are the 4 divisions in which you made those calculations.

Mr. Robertson.—Yes. These are the only divisions in which we have actual figures for match woods.

President.—Between them they have got about 300,000 tons.

Mr. Robertson.—Yes, but the trouble is the cost of extraction of isolated trees at the rate of one tree an acre. That is where the trouble comes.

President.—At present they are doing one tree an acre in this Insein Division and we know their costs.

Mr. Robertson.—Yes. It is one tree an acre in the accessible parts of Mahuya. But farther they go the greater will be the cost of extraction.

President.—They work the compartments in such a way that they don't think the cost would go up.

Mr. Robertson.—Mahuya is rather in a peculiar circumstance. It is probably one of the easiest areas to extract match wood from in Burma.

President.—They don't find Paunglin to be always inaccessible.

Mr. Robertson.—It is a very large flat country and consequently comparatively easy to work.

President.—There is that area.

Mr. Robertson.—That is probably the biggest area in Burma for growing match wood.

President.—Supposing the planted tree does nearly as well as the natural tree, that area furnishes the best possibilities.

Mr. Robertson.—Undoubtedly it is the most suitable for match wood.

President.—Do these two areas, Paunglin and Mahuya reserves contain more expensive classes of wood?

Mr. Robertson.—They have got a very large amount of Pyinmana?

President.—What is that used for?

Mr. Robertson.—For house building, planking work.

President.—What is the market value of that?

Mr. Robertson.—About Rs. 45 a ton.

President.—That is a little more than the match wood. What I am trying to ask is whether it is possible to work these forests because of the other classes of wood and plant in the Paunglin reserve.

Mr. Robertson.—That means to organising something to take up all the other species as well. Pyinmana and Kanyin are the two principal trees.

President.—It would not be very difficult to secure a market for these.

Mr. Robertson.—The market is such a very sensitive thing. Here you have competition in the Rangoon market. In the case of timber like Kanyin you have competition right across from Mergui in the Tenasserim Division. It is the slight difference of a rupee per ton in the cost of working a tree like Kanyin in the Mahuya which is floated with bamboos which affects the market for or against. If they can get timber from Mergui a rupee per ton cheaper than from the Mahuya you are left with the Mahuya timber standing for the next 20 years until the prices stiffen up.

Mr. Mathias.—At the present market rates it is a good proposition to extract hard timber.

Mr. Robertson.—Yes, if you can get the local contractors to take it up.

Mr. Mathias.—You don't do departmental work.

Mr. Robertson.—No. Practically the departmental extraction of hard wood is only for experimental purposes.

President.—It is an experimental work.

Mr. Robertson.—Government may lose a lot of money. If you declare that you are going to plant, it means putting on the market anything like 1,000 departmentally tons and Government may lose Rs. 5 or Rs. 6 a ton on that.

President.—It is not a very big sum. Supposing we were satisfied from the larger point of view that this thing was well worth doing not only in the interests of this industry, but in the interests of Burma, then it is not a big amount of expenditure.

Mr. Mathias.—If you look at it from both sides, you may be losing Rs. 5,000 on the one side and you may be gaining by the sale of match timber on the other side.

Mr. Robertson.—If it is a drop of Rs. 5,000 we could afford it, but the position as regards extraction of timber other than teak in Burma is that many people have tried on a large scale and I know of no one on a large scale who has made it pay.

Mr. Mathias.—Before any considerable number of match factories existed.

Mr. Robertson.—No, at the present moment.

Mr. Mathias.—You know of some recent attempts to put it on the market.

Mr. Robertson.—Not match wood necessarily, but the firms that are extracting all species on a large scale have found that it doesn't pay. If you like, you may cross-examine Steel Brothers who extract on a large scale and who are in an exceptionally favourable position, because they have purchased the rail road from their predecessor. The whole result of their experience has been to show that extraction of timber other than teak can only be undertaken by the petty man on a small scale working from hand to mouth. The whole reason for that is the low marketable tonnage.

President.—In this reserve area how much of marketable timber will there be other than match wood?

Mr. Robertson.—I have not got figures with me, but it is probably on the analogy of other forests not more than 5 to 6 tons to an acre and that would not pay for extraction on a large scale.

President.—From that wood how much would Government expect to get by way of royalty?

Mr. Robertson.—That would be a matter for tender.

President.—Ordinarily what is the rate Government expects from these classes of wood.

Mr. Robertson.—I should say Rs. 5 a ton. I could not imagine anybody taking it on if you put those forests up to tender.

President.—The point is that you selected this area for plantation.

Mr. Robertson.—A planted area would be a different proposition. If you have 25 tons an acre, it would be done with profit.

President.—I am talking of clearing the forests. There are certain classes of match woods.

Mr. Robertson.—You want to clear off the other forests.

President.—Yes.

Mr. Robertson.—I don't think you will get anybody to take it up.

President.—To clear up.

Mr. Robertson.—To clear up and burn them.

President.—You can sell them as fuel.

Mr. Robertson.—It would not pay to extract and sell as fuel.

President.—What will be the cost supposing anybody took it up to clear and burn the thing?

Mr. Robertson.—I don't think we have any actual figures because we don't do it departmentally. I should say it would be in the neighbourhood of Rs. 30 an acre and then the planting would be more. Then you would have to plant and you would have to tend.

President.—Supposing it costs you Rs. 30 an acre to do it, you would add to it the cost of planting.

Mr. Robertson.—Another Rs. 30 to plant and then you would have to take the question of policy as to whether it would be in the interests of Government to cut down all trees that might have a value or will probably have a value 30 years hence.

President.—That of course is a different thing. Supposing it is found that it is worth while for Burma to go in for this class of wood on a large

scale and if you are experimenting even an expenditure of Rs. 20 or 25 lakhs is not a big thing.

Mr. Watson.—I quite agree if there is anything to come back.

Estimate of plantation costs.

President.—What I suggest is: would it be possible for you to give an estimate for clearing the area and planting?

Mr. Watson.—It would be perfectly possible to work out the cost of clearing the area and planting. If I were to plant, I should do it in some other area near the railway line.

President.—What other area is there which would give you 100,000 tons to start with?

Mr. Watson.—We could organise the planting. The first thing to do would be to select suitable areas and work out the finance of it.

President.—I agree, but we cannot do it. I was simply giving this area as an illustration. Take any area which you think would be suitable. We only want a complete estimate.

Mr. Watson.—I would confine the planting operations to an area from which we could have marketable timber extracted and brought to the market. That is my point.

President.—That would be better still. As regards the areas for which you have given estimates, that contemplates ready-made soil.

Mr. Watson.—Yes.

President.—I think that that is a different thing from this. What we want is: supposing you are given *carte blanche* and you are told that Burma has got to create this 100,000 tons, what is the cheapest way in which you can do it?

Mr. Watson.—I should concentrate on that problem and would probably be in a position to give you an answer after 20 years and not a day earlier. I have seen many optimistic estimates going wrong and personally I would not risk an answer at present.

President.—You may be going a little the other way this time in taking a too pessimistic view of the problem. The idea is that Government like anybody else must take a reasonable view of the situation. You are talking of conditions under which no risk is taken. I say that Government must take the ordinary business risk and then go in for that. After 20 years or so, you might give us information that was positively perfect.

Mr. Watson.—It might be positively against it! That apart, if we are to undertake plantation we would have to work, say, 4,000 acres a year. But we could not get the 4,000 acres cleared in time to be planted. The cost of planting is in the neighbourhood of Rs. 30 per acre.

Mr. Mathias.—How much could you plant?

Mr. Watson.—The present planting is just about 5,000 acres a year.

Mr. Mathias.—Could you do that?

Mr. Watson.—I should strongly advise to. We could, if we were told, divert about 1,000 acres for match wood.

Mr. Mathias.—If you reserve some area for planting match wood, you will have to reduce your teak planted area, by so much.

Mr. Watson.—Yes.

Mr. Robertson.—It will be somewhat like the rubber plantation.

Mr. Mathias.—Have you got any information regarding the cost of plantation?

Mr. Robertson.—We could get it easily. Our cost of planting where we have not had the shifting cultivator to work for us has been anything up to Rs. 150 an acre. Then we had to do the departmental clearing and the departmental planting. I am not sure but I think that rubber planting would be much the same.

Dr. Matthai.—I find that according to your statement Rs. 120 will bring in a royalty of Rs. 11 on 25 years rotation.

Mr. Watson.—Assuming that the estimate of the outturn is correct, I think that it would be a paying proposition.

Dr. Matthai.—They are paying Rs. 12-8-0 at present per ton as royalty. If you had to spend Rs. 120 per acre as the cost of formation, etc., and the royalty came to Rs. 12-0-0 it would not be any more expensive than it is.

Mr. Watson.—That is so.

President.—In fact it may work out more.

Mr. Watson.—This is only an estimate.

Mr. Mathias.—That is planting under normal conditions, is it, not?

Mr. Watson.—If you take Rs. 120 per acre, it will allow for abnormal conditions.

Dr. Matthai.—As regards Rs. 120, you assume that there is no shifting cultivation in that area.

Mr. Watson.—Yes. Of course to do this we would require special staff. We are not staffed to do that.

Mr. Mathias.—On your calculations, it would be a small margin of profit of one rupee a ton.

Dr. Matthai.—Your cost *plus* interest and nothing more than that.

Mr. Watson.—We get nothing more than 4 per cent. I don't think that even the teak plantations pay us more than 4 per cent.

Dr. Matthai.—Do you get your cost back?

Mr. Watson.—Yes and 4 per cent. compound interest.

Mr. Mathias.—Your cost is Rs. 10-8-0 and you will be getting Rs. 12-8-0. That means two rupees a ton which will be more than 4 per cent.

Mr. Watson.—Rs. 10-8-0 includes the 4 per cent.

Mr. Mathias.—Then it will be about 20 per cent.

Mr. Watson.—I don't think that any planting operations will give more than 4 per cent. compound interest. Take our planting operations. I don't believe that our teak planting operations are going to give more than 4 per cent. compound interest.

President.—What is the profit that Government expect from teak?

Mr. Watson.—They have never said anything; nor have they laid down anything. It is a question which they have not considered.

President.—On an average what is the net profit that they make now?

Mr. Watson.—We have not had any teak plantations bearing any yield. The teak plantation takes 100 years and the Forest Department has been in existence for the last 70 years only. As a matter of fact we have got a few acres where trees have fully grown to size. They are not as good as they should be. I calculated some time back that these older plantations gave about 4 per cent. compound interest.

Dr. Matthai.—Your point is this. Supposing you are able to get a return of 4 per cent. compound interest—whatever be the cost of plantation and formation—then from the forest point of view it is a reasonable proposition.

Mr. Watson.—Yes. I would even go further and say that it is better irrespective of the cost. We want growth on the land. I did this calculation on your request to the best of my ability on assumed data.

Mr. Mathias.—I take it that Government might reasonably expect from these forest resources to get a rate rather in excess of the current rate of interest at which they could borrow. The policy I take it is somewhat similar to that adopted in the Irrigation Department. Should the profit work out at about 6 per cent.?

Mr. Watson.—6 per cent. on planting we could never get. The European forestry allows only for a profit of 2½ per cent.

Mr. Robertson.—The suitable rate of interest will probably be one per cent. over the Government rate, according to European principles.

Mr. Mathias.—It works out somewhere near 6 per cent. According to your calculation it is something like 20 per cent.

Mr. Watson.—No. The Board asked me for a calculation on the finance of a plantation on the lines of the one in Troup's book. I made the calculation to the best of my ability showing what the reasonable from planting might be expected to be.

Mr. Mathias.—That comes to Rs. 10-8-0, after 15 years.

Mr. Watson.—If we got a royalty of Rs. 10-8-0 it would mean that the money put in had yielded about 4 per cent.

Mr. Mathias.—If you get Rs. 12-8-0 as at present, you will be making a handsome profit.

Mr. Watson.—Yes.

President.—To-day they pay you a royalty of Rs. 12-8-0 per ton for trees which are growing naturally and those trees may not be as accessible as you may make them if you undertake plantation. You may be able to get even a higher royalty provided the cost of extraction and transportation is reasonable. That is the advantage in a plantation which the natural forests don't have.

Mr. Watson.—I quite agree. I am in favour of doing it. When you speak of a royalty of Rs. 12-8-0, we have got that tendered for the particular forests whereas in the case of the other forests which we have put up we have been offered a royalty of only Rs. 4.

President.—If you were planting you would naturally select areas which would be more accessible than those natural forests and therefore it might pay a man to give you a royalty of Rs. 12-8-0 or even Rs. 15.

Mr. Watson.—Yes.

President.—Therefore from the Government point of view whatever they get in excess of Rs. 10 would be to their interests.

Mr. Watson.—Yes.

President.—Four per cent. compound interest after all is not bad.

Mr. Watson.—It is very good over a series of years.

President.—It might mean more than 5 per cent. simple interest.

Mr. Watson.—Yes. In forest plantation we might almost rule out the question of interest because we would help to replace the stock on the ground.

President.—Your royalty would not be determined by the cost of plantation but by the accessibility of the forest.

Mr. Watson.—That is the point.

President.—To-day you may get Rs. 12-8-0 and it may be raised to something higher if the forest is accessible.

Mr. Watson.—Yes.

Dr. Matthai.—For a more accessible block in the same reserve you had another tender which you accepted recently for Rs. 6.

Mr. Watson.—It was another reserve.

Dr. Matthai.—Was that from a match factory?

Mr. Watson.—I am not certain but I think it was from the same man.

Dr. Matthai.—It has been accepted by the Forest Department.

Mr. Watson.—It is before Government at present.

Rates of growth.

President.—When you are planting I want to know whether you will have to wait until the trees have reached their full girth before you can tell that the plantation has succeeded or can you say after two or three years whether it is doing reasonably well.

Mr. Watson.—They generally do very well in the first ten years and after that something happens.

President.—What happens?

Mr. Watson.—The growth goes wrong. In our teak plantations the trees grow beautifully for ten years and then something happens with the result the growth goes wrong. We might get insects or something else. So many things happen.

President.—I think that the plantation undertaken now by Government is teak.

Mr. Watson.—We have got plantations for other species also. Up till about ten years ago, we planted nothing but teak. Now we are planting extensively Pyinkado and other species.

President.—How many years does Pyinkado take to grow?

Mr. Watson.—We do not know.

President.—I see from one of the papers you have submitted that you have been planting Letpan.

Mr. Watson.—Only on a very small experimental scale. We had a lot, but most of that was washed out by the floods.

President.—In eight years, it will attain a girth of about 15 inches in diameter.

Mr. Watson.—We may get it in eight years on good soil.

Mr. Mathias.—Would any experiments carried out in India be a guide for similar growth in Burma?

Mr. Watson.—I should not think so. It would be a guidance as regards the method of tendering but not as regards the result or rate of growth.

President.—Supposing we accept your figures as regards cost the next question that remains is the selection of areas. I think taking a reasonable view you may be able to suggest areas in which this may be undertaken.

Mr. Watson.—I should say straightaway that our first experiments would be undertaken partly on the banks of the Irrawaddy and partly in conjunction with our other plantations. We would take part of the areas which we are planting in Toungoo.

President.—I take it that Sawbya does not grow in the riverine areas.

Mr. Watson.—No.

President.—As regards riverine areas the trees that matter most are Bonneza, Gwe and Maulettanshe. Adamjees say one of the best woods is Setkadon.

Mr. Watson.—It only grows on the banks of rivers and on the edge of evergreens. It also grows in strips in more moist valleys.

President.—This maulettanshe does it generally grow anywhere? Messrs. Adamjees consider this as one of the best matchwoods.

Mr. Watson.—It only grows along the river banks and on the edge of evergreen forests. Any experiment in plantation will have to be made in a very moist climate.

Dr. Matthai.—We saw a few at Mandalay I think.

Mr. Robertson.—They might be growing along some of the river banks.

President.—There are a lot of Yamane?

Mr. Robertson.—These are very much subject to insect attack.

President.—These are the 10 species of trees which we have to bear in mind.

Mr. Watson.—Yes, because the first thing for us to know is the species you want us to plant and then experiment on them. As regards experiment I should say that we would experiment at our various planting centres, viz.: Tharrawady, Sagaing, Toungoo and Kemendine.

Mr. Mathias.—How long would it take you to know the result of the experiments?

Mr. Watson.—I should say 10 years, but personally I should think it would take longer: I should not hope for any results before 20 years.

Mr. Robertson.—In the first five years we would expect to see definitely whether they would grow with any chance of success and at the end of 10 years we should be able to give you an idea of what results we might expect, but on the whole it is a very doubtful problem, whether even at the end of 10 years we could do that.

President.—Then there is this pine.

Mr. Watson.—The pine grows naturally and would not be planted. There are considerable quantities of it north of Kalaw in the Federated Shan States. There would be no difficulty.

President.—Are there very large quantities?

Mr. Robertson.—Comparatively large quantities.

President.—There are tremendous quantities as far as I can remember between Kalaw and right up to Taunggyi?

Mr. Robertson.—You see quite a number of patches but the total tonnage as Mr. Cochrane worked this out, is on the basis of 1,000 tons a year, so that you will have the whole lot out in one year.

President.—Where are the larger quantities?

Mr. Robertson.—In the part running north of Kalaw. It is not pine right through. You have 20 miles through of the biggest solid block of pine forest which starts about 20 miles north of Mōng Pawn beyond Panglong. They are quite out of reach.

President.—How far is it from Taunggyi?

Mr. Robertson.—That is about 50 miles.

President.—So that the accessible quantities are really small?

Mr. Robertson.—Yes.

President.—What is the workable tonnage?

Mr. Robertson.—I should think if you get 1,000 tons a year you would be lucky. A lot of the pine is full of knots and the complaint we have about it is that the knots are very resinous and even if you can get the cutters through the knots you have got to cut wide strips across the veneers in order to cut out the knots so that there is a big proportion of wastage on account of the knots.

Dr. Matthai.—One of the people who came to give evidence said that if they worked on the Japanese machine, where you do the grooving separately, it would not be quite so difficult to work on the nodes and pick them out.

Mr. Mathias.—Mr. Bawaney told us that provided it was boiled first, there would be no difficulty in utilizing the pine for splints.

Mr. Robertson.—Another difficulty with pine is that you get more growth of branches in the lower parts when it is planted.

Dr. Matthai.—Is the pine wood here different from European pine wood?

Mr. Robertson.—It is a different class of pine but there is not very much difference in the wood.

President.—I think you have given me these three or four areas.

Mr. Watson.—Our main planting areas are north of Toungoo, Tharrawady, Sagaing and Kemendine and we are trying to make a start in Pyinmana and Insein. We should experiment in these six centres.

President.—Mr. Bawaney gave us a list of the places from where he brought his wood and he told us that he got considerable quantities from Martaban; then he also got some from Toungoo.

Mr. Watson.—We might also plant in Martaban. As a matter of fact we should try planting everywhere, say, Prome for instance.

President.—Adamjees have got a big lot from the Prome division.

Mr. Watson.—Yes. But I have given you the five most important centres.

President.—Then they also got a little from Mandalay. Of course the biggest lot they got was from Wanetchaung and other places. This will give you an idea of the suitability of the soil so far as natural growth is concerned. The next lot is from his own forest where he got nearly 3,800 tons; then he got large quantities from Port Blair. These areas that you have mentioned will naturally lend themselves to plantation because these trees actually grow there.

Mr. Robertson.—It is really more a question of picking out suitable localities within these areas; that is the difficult part of a big plantation.

President.—Then they have got a little from Toungoo; that shows that trees would grow there.

Mr. Robertson.—That supply might actually have come from an area of 60 or 70 square miles, with the trees dotted here and there.

President.—He got it at the same price so that the cost of extraction could not have been very much higher.

Mr. Robertson.—It is very likely that the supply is practically exhausted.

Mr. Mathias.—I understand in all these reserve forests there is a limit to the cutting to 5' girth. If they cut all trees of 5' girth possibly in ten years' time it will be possible to cut again. Is that correct? Would it take 10 years for the smaller trees to grow?

Mr. Watson.—We reckon 30 years ordinarily for the teak.

Mr. Mathias.—The number of trees already cut is of 5' girth.

Mr. Robertson.—It will sometimes take 10 years to get from 5' to 5' 6".

Mr. Watson.—It grows rapidly to 3' or 4' girth and then the growth is slow.

President.—But 4' would not be an unsuitable girth for match making? It can be worked down to 6".

Mr. Robertson.—I was asking Mr. Bawaney to take smaller girth.

President.—He would naturally select a tree of 5' girth, of course.

Mr. Robertson.—And he was no doubt right because there was less overhead loss on a 5 feet than 3 feet log.

Mr. Mathias.—But if you are going to cut 3' logs which grow very quickly it may mean that the cost of cutting the wood will be very much less than cutting a log of 5' girth.

Mr. Watson.—Yes.

President.—Supposing Messrs. Adamjees got their supplies from these areas every year for 15 years; can that be taken as more or less reasonable?

Mr. Watson.—I would not go as far as that.

Mr. Mathias.—When you carried on your experiments you would naturally also consider from the commercial point of view whether you would consider 3' girth as more remunerative than 5' girth.

Mr. Robertson.—Yes, we should work it out on the various girths and we might find that the money value may come very much below on 3' girth than on 5.

Dr. Matthai.—From the forest point of view what is the point in fixing a minimum girth?

Mr. Watson.—In the case of matchwood it is entirely arbitrary.

Dr. Matthai.—Generally in your leases people are confined to a particular girth, are they not?

Mr. Watson.—Yes. This works out in the case of teak wood by a calculation as to the quantity of teak and we calculate from those calculations the tonnage or the number of trees that we can take out and still leave the forest with the same yield annually.

Dr. Matthai.—It is a question of regeneration, is it?

Mr. Watson.—It is a question of sustained yield.

President.—Mr. Robertson, you prepared an estimate of the bonmeza?

Mr. Robertson.—I really don't know where those estimates came from. My recollection is that I gave Mr. Bawaney some vague figures in conversation as to what it might cost to form a plantation, but I do think I certainly never said that in 13 years' time the growth would be 7 feet and I am very doubtful if I had said that it would yield 20 tons of timber in 15 years. I was rather horrified to see this statement published!

Dr. Matthai.—Do you entirely repudiate it?

Mr. Robertson.—I certainly never gave it as an official forecast.

Dr. Matthai.—Does bonmeza grow faster than letpan?

Mr. Watson.—If you look at page 32 of Mr. Troup's book, under (b) either bonmeza or any other matchwood. The only figures we have are for the growth of teak and comparatively few figures for any other species.

Dr. Matthai.—On that point may we accept Mr. Troup's statement? He gives somewhat definite figures.

Mr. Watson.—It seems to have come out to Mr. Robertson's figure but I would certainly not guarantee the trees being 6 feet in 13 years.

Dr. Matthai.—If you look at page 32 of Mr. Troup's book, under (b) Rotation he says "We may assume that the exploitable age should never exceed 30 years and that 25 years will be a fair general average to take."

Mr. Watson.—That depends absolutely on the soil.

President.—That is a kind of tree which so far as present experience goes is not really very suitable?

Mr. Watson.—That is so.

President.—Perhaps 20 years may be taken as a reasonable period for these soft woods?

Mr. Robertson.—20 years for 5 ft. girth. It depends on how you take the 5 ft. In most of these calculated figures the girth is taken at breast height.

President.—What would be the length of the log?

Mr. Robertson.—25 ft. They are going to cut it in small lengths. Girth is a big factor.

President.—It would be at about 12 ft.

Mr. Robertson.—Yes. The midgirth measurement would also be without bark so that 6 ft. breast high girth would give you 5 ft. midgirth log.

Dr. Matthai.—6 ft. including the bark?

Mr. Robertson.—Yes, when it is felled and as he measures it up.

Dr. Matthai.—Can he take it lower than his breast height?

Mr. Robertson.—That is always the accepted standard.

Mr. Mathias.—Actually your forest rules prescribe that the trees should be cut breast high.

Mr. Robertson.—We prescribe that they must not be higher than 3 ft. They are getting down to 2 ft.

Dr. Matthai.—In Germany they tear it out by the roots.

Mr. Robertson.—Yes.

Planting Methods.

President.—As regards planting I want to know a little about the methods you adopt.

Mr. Robertson.—We hand over the area to the cultivators and they put in their crops. Bamboo stakes are set in in rows 6 ft. apart and either a number of seeds or a young plant is put in at each stake at the beginning of the rains. In the following cold weather when the crop is reaped the number of plants are counted and the cutters paid for them. The shifting cultivators are paid according to the success of 10 months' growth. He puts the plants

down in May or June and we may take them over in January or February. We pay him so much per 100 plants. If there was less than 50 per cent. success, he gets nothing. It is of no use to us.

Mr. Mathias.—Why not?

Mr. Robertson.—There is too much trouble in getting the weeds out. No amount of patching will be economical.

Mr. Mathias.—You pay him at a higher rate, the nearer he gets to 100 per cent.

Mr. Robertson.—Yes.

President.—After that the shifting cultivators' work is finished,

Mr. Robertson.—At the beginning of the rains we go and free all these young plants from the weeds.

President.—You have to have salaried men.

Mr. Robertson.—Yes. We may have to weed three times during the first rains after the plants have been put down. In the third year the plants are usually well above the weeds and the only danger is grass. In the third year there is only one weeding and in the fourth year there may be none, but in some cases light weeding is necessary up to the fifth year. When the fifth year comes, it may be necessary to thin out the plantations, to cut out superfluous stems and we do that again every five years. This is of course with teakwood. It might be different with other species.

President.—Then after that they take care of themselves.

Mr. Robertson.—Yes. They are thinned after intervals.

Dr. Matthai.—After the fifth year you have a general sort of supervision and nothing intensive.

Mr. Robertson.—Yes, they may be left alone after 10 years.

President.—As the soft woods grow quicker than teakwoods, it is possible that weeding process might be shortened.

Mr. Watson.—That is very probable.

Mr. Robertson.—That depends on the density and the thickness of the leaves.

Mr. Mathias.—As they grow quicker, the soft woods in three years would grow into double the height and consequently be beyond the influence of weeds.

Mr. Robertson.—Yes.

Dr. Matthai.—You say in your note if you plant letpan on the river side there is the risk of instability of the soil.

Mr. Robertson.—The whole thing may be washed away by the floods.

Dr. Matthai.—Would that danger occur after the 5th year?

Mr. Robertson.—Yes.

Dr. Matthai.—Unless there is a very big flood a tree like bombax after it is grown about 5 years would be able to resist the encroachment of water.

Mr. Robertson.—It may be washed away altogether, soil and everything. If the river leaves its course and takes a bend, it will take everything—even an island of 20 or 30 years old.

President.—It might be possible to avoid selecting those areas.

Mr. Robertson.—Those are areas from which you get fresh alluvium.

President.—Who is the Conservator of Forests, Hlaing Circle?

Mr. Robertson.—Mr. Barrington. He has considerable experience of planting species other than teakwood.

Replies to the Questionnaire.

President.—I take it the information that you have given as regards the Match Industry is mainly derived from Messrs. Adamjee Hajeer Dawood chiefly.

Mr. Robertson.—Under what head?

President.—In various cases about the different kinds of wood suitable for manufacturing matches, wages and things like that are mainly derived from local enquiries.

Mr. Watson.—Yes, enquiries were carried out by Mr. Moodie.

President.—There is one point. Mr. Troup has written his report and some people have acted on that report. Now we have to be very careful about what he says. He has given a long list of possible sites, the kinds of wood available, etc. As a matter of fact so far as the woods are concerned, he has not told us anything which is borne out by experience.

Mr. Robertson.—His statement as regards wood is as a result of actual test. There is another thing also. These woods were sent home to a firm in Berlin who made match-making machinery. I think that a greater number of these woods were favourably reported so that their machinery might be sold.

President.—He doesn't mention which of the woods have been found really suitable for match-making. That part of the report is really quite out of date.

Mr. Robertson.—Yes.

Sites for factories.

President.—Then as regards the sites, there are several sites.

Mr. Robertson.—It boils down to Mandalay and Moulmein.

President.—As regards Mandalay he has given a long list. He has given 33 possible sites. As far as we can see at present really speaking even Mandalay has no real advantage over Rangoon, leaving alone the other sites.

Mr. Robertson.—No.

President.—If you are selecting the other areas where you are going to plant, even then Mandalay will have no advantage at all. As a matter of fact it is at a disadvantage.

Mr. Robertson.—Except if we were to plant large supplies, we should have to rope in Upper Burma as well. Even then the planting would be done, I think, rather with reference to extraction by rail than with reference to extraction by river.

President.—That is always more reliable as regards the supplies.

Mr. Robertson.—It is reasonably certain.

President.—So that as far as Burma is concerned it does seem Rangoon is the most suitable locality.

Mr. Mathias.—Actually Mandalay is not very well situated for the supply of wood. There is no timber forest close to that.

President.—I am not able to understand why this match factory was started in Mandalay.

Mr. Robertson.—They had at that time along the river above Mandalay very considerable supplies of letpan. It comes up like a weed on the sand banks and on the islands in the Irrawaddy river, so they thought they had an assured supply of letpan.

President.—Now that letpan is being washed out except for veneer, it doesn't seem at all a suitable place.

Mr. Robertson.—No. I think for the present they should concentrate on Rangoon possibly Moulmein and some place in the south.

President.—As regards the total requirements of Burma, really speaking, taking the present figures, the Adamjee's factory and one other factory will probably supply the whole demand.

Mr. Robertson.—Of course I was looking at it entirely from the possibility of its being cheaper to take the stuff out to other sites and manufacture splints there or rather veneers.

President.—That we have also to consider. It doesn't seem that there would be much economy in it.

Mr. Robertson.—Under present conditions Rangoon is the only possibility and later on when we know more about things, there may be some place in Tenasserim.

President.—As far as one can see anyhow Rangoon is as good a centre as any and better than most others.

Mr. Robertson.—Yes. The best thing is to concentrate on Rangoon.

Foreign capital.

President.—In answer to B (6) you say that foreign capitalists are interested in two factories, the Kamaung factory and the Rangoon Match Works.

Mr. Watson.—I had that information from Mr. Moodie. That is all I know about it.

President.—It did look as if that might be so. We put that question to Mr. Bawaney and he denied it.

Mr. Watson.—That was a result of Mr. Moodie's enquiry. But I do know that the enquiries for supplies were made by the Swedish agents.

Method of selling timber from Government forests.

President.—As regards the arrangement for the sale of trees from Government forests to match factories, there are two things. The first is that you must get a certainty that you would be able to dispose of your timber and the second is that there must be a reasonable certainty in the minds of the manufacturer that the supply would be available.

Mr. Watson.—In calling for tenders for timber from reserve forest we usually mark up the first coupe and say we either call for tenders for so many marked trees in which case it would be simply a yearly extraction of a coupe or we have tenders for working definite areas for five or ten years.

President.—Would it be possible for Government to fix a flat rate of royalty at so much per ton without inviting tenders?

Mr. Watson.—No, because the tenders are fixed according to the competition.

President.—Supposing you went in for plantation on a sufficiently large scale.

Mr. Watson.—If we had a plantation we would put up each coupe to auction.

President.—The question arises in this way. Supposing we came to the conclusion that there was this Trust operating and assuming we came to the conclusion that it was not to the interests of the country to allow a Trust to operate in that way: of course if the Government say that this is a Trust and shall not exist, it is well and good but supposing that is not found possible then the Government must devise some method by which it can prevent the Trust from getting its principal raw material.

Mr. Watson.—The Government don't say that they would accept the highest tender.

President.—If you make the timber available to any trader, by tender, then you may get a tender from a man who is not a manufacturer of matches and if he gets it, he may give it to the Trust afterwards.

Mr. Watson.—I don't think we would allow that.

President.—My point is this. You are the principal supplier of the raw material. The idea is that the raw material should not pass into the hands of those companies which are not approved by Government. If you put up the timber for sale or to auction, one man may take it and sell it to those people not approved by Government. But if you say that only the person running a *bond fide* match business is entitled to this wood, you can keep out the other men. Would there be any difficulty in doing like that?

Mr. Watson.—The tender system was adopted in order that there should be no question of any favouritism in allotting forests. That has been the policy

of Government for the last 20 years. Further, if you are to limit the tenders to a group of five match factories, there is nothing to prevent those five people from forming a ring to keep down the price.

President.—Therefore I suggest that you should offer a flat rate.

Mr. Watson.—In that case Government would be accused of favouritism. It might be possible, but I should not advise anything like that being contemplated till the necessity arose.

President.—The necessity might arise in this way. Supposing it is found that it is not advisable that any foreign monopoly should operate in the country.

Mr. Watson.—We should have to devise some means of getting round it.

Mr. Mathias.—I suppose that it would be possible to avoid the implication of favouritism, if you had a fixed rate and three or four match factories applied for the same area, by drawing lots for them.

Mr. Watson.—It might be. But the usual thing would be to have a fixed rate and to either call for tenders for a lump sum for the right to work or to auction the right to work.

Mr. Mathias.—If you had a fixed rate and called for tenders and three people applied for the same area, it would be difficult.

Mr. Watson.—In that case we should put it up to auction.

Mr. Mathias.—But if it were decided to abolish the auction system, supposing that Government were to fix the rates at Rs. 12 or Rs. 15, and that the Indian match factories were allowed to extract timber at that rate, then and if two or three people applied for the same area, the only way would be to draw lots in order to avoid the accusation of favouritism.

Mr. Watson.—This would arise in the case of planted forests but in the case of natural forests it would be uneconomical for people to extract matchwood only.

Mr. Mathias.—I don't think that the question would arise so much in regard to forest areas as in regard to the planted areas.

Mr. Watson.—The problem won't arise for another 5 years.

Dr. Matthai.—In the case of Mahuya reserve, a case like that might arise.

Mr. Watson.—As regards Mahuya, I am not certain but I think that it provides for renewal after a year of negotiation.

Dr. Matthai.—Supposing you don't do that and you are putting up to auction or tender, in that case the same difficulty might arise.

Mr. Watson.—Yes.

Mr. Mathias.—As regards these concessions for matchwood areas, in some ways they are like mining leases or prospecting licenses. The man has to go into the forests and ascertain himself how many trees there are and it is suggested to us that a competitor who has not spent a penny on inspecting the forests may bid a few rupees more and the man who has done the prospecting may lose.

Mr. Watson.—That will happen always.

Mr. Mathias.—There is something to be said for their point of view.

Mr. Watson.—Of course there is. It happens in a thing like teak. We put up teak forests. We may have a firm taking elaborate trouble to get its tender figures right which may be ousted by a firm putting in a speculative tender.

Mr. Mathias.—As regards the prospecting license, so long as the prospecting license was in force, the licensee has the right to take up a particular area on payment of the fixed royalty. Cannot something on those lines be worked out?

Mr. Watson.—I don't think that it would work.

Mr. Mathias.—I am speaking of match wood generally.

Mr. Watson.—I don't believe that it would pay to work them by themselves.

Dr. Matthai.—Adamjee's work the reserves themselves.

Mr. Watson.—Mr. Adamjee Haje Dawood is an exceptional man.

President.—The only thing would be to do departmental extraction.

Mr. Watson.—We could not touch it. We would have to have a special staff, and I should not advise as a financial undertaking.

Mr. Mathias.—For the small factories, the most economical method of providing themselves is to buy from petty contractors.

Mr. Watson.—I don't see any other alternative.

Mr. Mathias.—It won't be a good proposition for them to take one of the forests in Insein and work like Adamjee's.

Mr. Watson.—I don't think that they have got either the capital or the organisation.

President.—Assuming that you undertook this plantation you would call for tenders in the ordinary way or auction the coupe?

Mr. Watson.—Yes.

Dr. Matthai.—Would not a system of rationing work according to the output of factories?

Mr. Robertson.—It will work all right so long as there is a margin of supplies. The moment you get short of supplies, there will be a frightful outcry that this or that man has not got enough to keep his factory going. We had that in the Munitions timber. We were giving out areas according to the output of the mills and there was a most fearful amount of outcry.

Dr. Matthai.—Because the situation of the plantations would differ. Some of them are easier to work.

Mr. Robertson.—Yes.

President.—Supposing the Trust is operating it might put up a man to take the whole quantity.

Mr. Watson.—Yes.

President.—If the Trust operates it would be the first thing that it would do.

Mr. Watson.—Yes.

Mr. Robertson.—You can generally get round that by putting a minimum outturn or minimum royalty.

Mr. Mathias.—If a manœuvre of that sort were attempted, Mr. Adamjee and others would not keep silent.

Mr. Robertson.—Not for a moment.

Mr. Mathias.—It would be quickly brought to your notice.

Mr. Watson.—Yes. If we call for tenders for match wood we would favour those people who are manufacturing matches.

President.—Would you provide for that in your lease?

Mr. Watson.—In sending up the tenders to Government for acceptance, we would draw their attention to those who are recognised manufacturers of matches as distinct from those who are not.

President.—There are great practical difficulties. Supposing you undertake plantation and the wood is good, to-day it has a good market in other parts of the world.

Mr. Watson.—Yes.

President.—It may be that you may go on planting and yet all the wood may be exported.

Mr. Watson.—Yes. I very much doubt whether there would be room for many manufacturers.

President.—What do you mean?

Mr. Watson.—Supposing a big show came in, all the smaller people—machinery, organisation, etc.—it might buy straightaway.

President.—That is one of the problems before us in this particular industry. Here is a big organisation which has established itself all over the world. It may be that this country may not like it and may like to provide against it. In such a case how would the Forest Department be able to help the Government? That is why I am asking you the question how to prevent the monopoly?

Mr. Watson.—In the case of tenders put up for teak wood we turn down very often the highest tender on the ground that the man is unsuitable and that we don't consider that he has got the financial backing or the experience of working. We by no means accept the highest tender.

President.—Would it be possible for Government to do this that the Department would have this plantation; that it would work it through an agency and sell the extracted lot.

Mr. Robertson.—It will make very little difference.

President.—It will in this way. The final selling authority would be Government. Instead of claiming a royalty of Rs. 10, supposing you get a man to extract the log and pay him Rs. 20 you sell at Rs. 30 to the manufacturers of matches.

Mr. Robertson.—It comes to very much the same thing. We will be selling cut logs to the manufacturers instead of on the stump.

President.—The quantities available in Burma are far in excess of the requirements of the match factories here, so that the Indian manufacturer might want to buy his timber from Burma if they knew that you had this timber for sale at a particular price?

Mr. Robertson.—The same thing is done in the case of teak trees. Indian buyers come in here and tender for forests for export to India, and not for local use here. It is true they generally work through local firms but there are certain parties who have definitely tendered for teak forests for their own industry in India.

President.—You stocked these teak logs and sold them by public auction in Rangoon. I say the same thing about this log except that in place of the auction you may have a flat or any other rate at which purchasers in India might secure its supply.

Mr. Watson.—We would not take the risk of extracting or felling.

President.—You may tell him that you would extract them only if he bought them.

Mr. Robertson.—The actual cutting and extraction he can always secure through his agency. The point really is where the control has to be, is it to be at the point where the tree is on the stump or is it to be where it is made over to the purchaser. It does not really make very much difference whether Government fells the tree and after that hands it over to the purchaser or they hand over the tree on the stump.

President.—If it turned out to be a good proposition then there might be a good market outside Burma and India.

Mr. Robertson.—It is an indirect form of protection really to the indigenous industry.

President.—Of course it may be possible to have more factories in Burma to supply matches in India.

Mr. Robertson.—In the end that would be the most economical way of developing the match industry because it can never pay to take all your timber over to India and pay heavy freights on it. You can rather make matches out here, and supply them to India.

President.—May I put it this way: would the Government of Burma, so far as the forests are concerned, agree to a flat rate or a more or less sliding scale or whatever it is, the idea being that after, for instance, say, five factories have been established in the country, they might mind that for the forest department it was more remunerative, to sell the logs outside India than sell within the country?

Mr. Watson.—There is the danger of favouritism if the department do away with the system of tender. As I said I find it very difficult for a commercial

department agreeing to sell the stuff at a lower price than its commercial value. We could fix up the price by negotiation, that might be possible, but there again, as I said, I find it very hard under modern conditions to avoid the danger of favouritism if we do away with the tender system.

President.—You can have the tender system amongst the local purchasers but they might export it to the detriment of the indigenous industry.

Mr. Watson.—It is for Government to say that it is not for export and thus prevent its export.

President.—If this Trust has made up its mind to do it, it will say “we will take away all the timbers from this place.” After all it is a very small quantity, 100,000 tons is nothing for them. For that reason it might be quite necessary to see that that did not happen.

Mr. Watson.—That is a matter of larger national policy and I think that is outside the scope of the forest department.

Mr. Mathias.—If the Local Government accept a policy of that kind will the forest department have any difficulty in giving effect to it?

Mr. Robertson.—If they say only certain people will get it, we will arrange to give it to them.

President.—You exported a lot of timber during the war. Were there any restrictions?

Mr. Watson.—What happened in fact was that we put forward a proposition as to the reasonable rates of export and there was no opposition from the mills because they had no market.

President.—Can you get wood from unclassified areas?

Mr. Watson.—I don't think it would be worth trying. In the unclassified forests people have a right to extract timber for domestic use and it is practically impossible to enforce the restrictions there.

President.—As regards reserved forests outside the plantations you can put these restrictions?

Mr. Watson.—We can. The only thing is that it will have to be so managed as to give a sustained yield.

President.—Have you given any exclusive rights to any people for the extraction of their timber?

Mr. Watson.—Yes, Adamjees are the only one, and then there was the other one but Adamjees' were the higher tender and they got it. So far there are no other.

Plantation by the Forest Department.

President.—As regards the general question, so far as the forest department are concerned, they would be prepared to experiment and to undertake plantation?

Mr. Watson.—Yes. As a matter of fact we are thinking of starting and we do experiment to a certain extent but we have not got on to it systematically because we have had no wholetime silviculturist for the last three years.

President.—Will you kindly think over this question and tell us what the difficulties are as regards expediting the question of plantation?

Mr. Watson.—The only difficulty is that we do not yet know how to grow them.

President.—Is there any question of expenditure?

Mr. Watson.—No. We can supply the funds if Government declares such a policy.

President.—As regards declaration of policy by Government in what form should they declare?

Mr. Watson.—They would merely say they would like the forest department to enquire into the possibility of planting match wood and the necessity of reserving extra areas for the purpose of planting match wood. If we had that order we would immediately divert a certain amount of acreage of our areas

for experiment and we would put a man on special duty to examine the areas along the Irrawaddy, and the sooner the better because it is possible that with the creation of the new services we will have no other man of experience and training because as soon as the new policy is adopted there will be no more recruitment.

President.—How many men would you require to carry out that project?

Mr. Watson.—I should require only one man. We can do with our existing staff but the only thing is that our staff is rather in a precarious position. We are 25 men short in the old Indian Forest Service; recruitment has closed down and they have not yet decided on the services to replace it or how it is to be recruited. We have not been in a position to start recruitment for the new service yet and we do not even know whether we shall get men.

Enumeration.

President.—As regards this enumeration would you be able to give us some information as regards the other areas?

Mr. Watson.—We can only give you figures as regards enumeration each year of the areas that are taken up by the working plan parties.

President.—How many areas are taken up in a year?

Mr. Watson.—We have four parties; they work at the rate of 150 square miles per year and a forest division may take three or four years.

President.—Do they complete one division and then come to the other?

Mr. Watson.—Yes. They value the forest, enumerate a particular species in one coupe and of one marketable species and then form an estimate of the marketable expenditure on the group.

President.—In the next year which are the divisions they are taking up and what group of species?

Mr. Watson.—Sawhya in Pynmana, North Toungoo and Henzada divisions.

President.—The two later divisions are those with which we are concerned. Will the information be available this year?

Mr. Watson.—We can, of course, give you some information but if it is a three years' job the working plan will be published three years later and it will contain all the figures. But we can give you figures of the results of enumeration each year at the end of the examination of this group of species.

President.—We would like to have as much information on this point as we can and you send it to us as you get it.

Mr. Watson.—I will do so.

President.—Are you in touch with Dehra Dun on this point? We wrote to Dehra Dun on this subject.

Mr. Robertson.—We are in constant touch.

President.—We have asked them to give us any information they may have collected and we wanted to know whether they have collected any information recently in Burma.

Mr. Robertson.—No, not in Burma. I don't think we have had the match question raised for a number of years. When I was in Dehra Dun the question used to come up but the rates at which the factories expected to get timber were so hopelessly impossible that we could do nothing. I think they wanted the timber at one anna per cubic foot!

Dr. Matthai.—How long ago was that?

Mr. Robertson.—In 1921-22. Last time I was down in Calcutta in 1922 some of the Directors of Industries were saying that the rate at which the manufactures expected to get timber for matchwood was an anna a cubic foot. That was impossible on the face of it. Various enquiries came up but none of them were really serious enquiries.

President.—People attach too much importance to the royalties which are nothing when compared to the costs?

Mr. Robertson.—No.

NOTES FOR TARIFF BOARD ON MATCHWOOD ENQUIRY.

BRIEF NOTE ON WORKING PLANS BY MR. H. R. BLANFORD, CONSERVATOR OF FORESTS, WORKING PLANS CIRCLE.

Definition.

A working plan lays down the management of a forest for a number of years. In Burma, working plans are now usually made for a whole division and lay down the full organization of the division for all works for a period of 10 years.

Working plans may or may not be based on data collected in field work. Those not based on field work are called "paper plans" and are framed to organize the work in less important forests or as a makeshift until field work can be undertaken.

Preliminary.

Before a working plan based on field work can be prepared a survey on a fairly large scale is necessary. The ordinary topo 1" survey maps are not sufficiently detailed for accuracy. We use 4" scale by preference but sometimes have to use 2" scale.

The survey is carried out by the Forest Survey party attached to the Survey of India, Burma Circle.

Field work for working plans.

The field work for working plans consists first of all in dividing the forest into compartments as the unit of management. Compartments vary in size according to the intensity of management but the average size is about one square mile.

Having laid out the compartment the Working Plans Officer has then to prepare an estimate of stock. To count out the stock on the whole area would take too much time except where the system of management is very intensive. About 25 per cent. is actually counted out and an estimate of the stock for the whole compartment is based on this. Care has to be taken to select the 25 per cent. of the area so that it is representative of the stock in the compartment, as types of forests and therefore numbers and kinds of trees vary considerably from place to place. The area selected for counting is called the sample plot. There are usually three sample plots in each compartment. Before selecting the sample plots, the Working Plans Officer has to examine the area and prepare a stockmap showing the distribution of the various types of forest and sample plots are selected as representative of the area. A sample plot party then proceeds to the plot and measures each tree. The trees are recorded by 4" diameter classes. Although every tree is measured, different kinds are so numerous that it is not usual to record every different kind in each plot. Usually the more important species only are enumerated separately, the rest being classed as "Others". The more important species vary considerably. In forest which is inaccessible to extraction of any timber except teak or other floatable timber, only teak and one or two more of the most valuable timbers are counted. In areas accessible for cart traffic and within an economic distance of a large river or railway a number of the more useful and marketable timbers are counted.

Besides this, however, in one plot in five, all species that are likely to be of any value at all and can be recognised, are counted separately. The

object of this is to give a general idea of the quantity of any kind of tree for which a demand may arise. As only one plot in five is counted for all species and as ordinary plots are counted out over 25 per cent. of the forest, it follows that the "all species" plots only cover 5 per cent. of the area and any estimate based on these counts is not very reliable.

The system of enumeration described above has only been in force for a few years. Previously still fewer species were counted separately and no attempt was made to obtain details for the less important kinds.

Matchwoods have up to now been in little demand and it is only during the last two seasons that any attempt has been made to enumerate them separately. Even then they have only been enumerated separately in every fifth plot, except in Insein division.

The field work also includes the collection of any data of rate of growth of the various species as may be possible. This is only possible for trees which show annual rings in the wood. All trees put on a ring of wood every year but it is only a few on a cross section of which the annual rings are clearly distinguishable. Teak shows clear annual rings and therefore we know a good deal about its rate of growth but few matchwoods show any annual rings, and the only means of determining the rate of growth is by periodical measurement of growing trees—a very slow process.

Working up data.

On completion of the field work, the Working Plans Officer has to estimate the total stock in each compartment from the results of enumeration in the sample plots. He then works out the total stock of the more valuable species in the forest and calculates the yield. The essence of sound forest management is the *sustained yield*. That is to say the yield must be fixed on conservative lines with due regard to sustaining or even increasing the yield in the future.

The yield is fixed at an annual amount that can be taken out of the forest over a period of years and leave the forest at the end of the period with the same total stocking or preferably an increased stock. Theoretically, the yield should equal the increment of the forest. Each tree in a forest is increasing in volume every year. If we had full data for the volume of increase in trees of different sizes we would fix that amount as the yield. This requires, however, a very accurate knowledge of the rate of growth and in the present state of our statistical knowledge is not possible.

In practice therefore the yield is calculated from the estimate of the stock. The following purely imaginary example may perhaps make it clear.

Let us assume that an area covering 100 square miles of forest is known to contain 200 tons of matchwoods over the exploitable girth per square mile and that the stock below the exploitable girth is ample to replace that stock in course of time. We then work out the rate of growth and calculate the period it will take for trees at present below the exploitable girth to grow up and replace the present stock of timber over the exploitable girth. Let us assume that this is found to be 20 years. We then know that it will be safe to work over the whole forest in 20 years and remove all timber over the exploitable girth. The total exploitable tonnage now is 100×200 tons = 20,000 tons and the yield can then be fixed at 20,000 divided by 20, or 1,000 tons per annum. Actually the yield could be fixed at slightly over this amount but the above example shows one simple method of determining the yield and it is unnecessary to go into more detail.

Having fixed the yield for a number of years the areas to be worked over annually are laid down, though as a matter of convenience this is usually done in consultation with the extraction agency.

The yield is usually fixed for a period of 30 years which is the usual period that the whole forest is worked over by selection for teak.

Besides fixing the yield and laying down the areas to be felled in, the working plan decides the silvicultural system under which the forest is to be managed. In Burma, we have two main systems:—

The Selection system, in which trees over the exploitable girth are selected for felling and the whole forest is worked over once in the period considered necessary for the trees cut out by selection to be replaced by smaller trees growing up over the exploitable girth.

The Clearfelling system, in which successive blocks of forest are clearfelled and planted up.

The former results in a forest of trees of different ages—uneven aged forest.

The latter gives a series of even aged crops and is so arranged that an equal area becomes ready to cut over annually.

The Selection system is peculiarly suitable to a forest in which only one or two of the many kinds of trees are marketable. It is the system that must for many years be used for matchwoods and the Clearfelling system can only be introduced for matchwoods, if and when, we get plantations of these species.

Working Circles.

In each division there are many classes of forest and probably there are different objects of management in each class. The same system of management cannot usually be laid down for the whole division. The division is therefore divided into different working circles which frequently overlap. A working circle comprises an area which is worked under one system of management with a definite object in view. For instance, a Burma Division, is usually divided into at least the following three working circles, while others may be added in special cases.

I. *Teak Selection working circle.*—This embraces the majority of the teak forests and may overlap other working circles. The working plan will prescribe the working of the forest as far as teak is concerned for the whole working circle.

II. *Trade working circle.*—This will include all areas accessible to trade extraction of timbers other than teak, after allotting areas necessary for the village, as apart from trade supply. The system of management is usually clearfelling, though, until plantation work can be organised on a large scale, it is usual to continue to work the greater portion by selection.

III. *Village Supply working circle.*—Areas required for the supply of the local population are allotted to this working circle which is managed entirely with that supply in view. Politically this working circle is naturally very important. Commercially and financially it is unimportant.

Matchwoods would usually be worked under the Trade working circle, in conjunction with other marketable timbers but in cases where only matchwoods are exploitable a special matchwood working circle might be formed, as has been done in Insein under the new working plan.

NOTE.—A working circle has nothing to do with a territorial circle such as the Hlaing Circle, which is purely an administrative unit.

Accessibility.

As the system of management depends so much on accessibility, a note on accessibility as applied to Burma forests may not be out of place. Accessibility depends almost entirely on the means of extraction. Teak after standing girdled for three years, will float. It is a very durable timber, not liable to rot or damage by white ants and can therefore lie in the forest or streams for a number of years without serious deterioration while in course of extraction. It can therefore be extracted from practically every forest in Burma, provided a stream which will float timber even at rare intervals after specially heavy rain is available. It is also our most valuable timber and can carry high costs of extraction before reaching a floating

stream and, even in exceptional cases, will pay to extract by tramways where difficulty or delay in floating justifies the expense. This is even in spite of the fact that it rarely comprises 10 per cent. of the stock in any particular forest and few forests can produce more than two or three tons of teak per acre. On the other hand few of the other marketable timbers will float. The tonnage of such timbers in relation to area is small (probably not more than 6 to 8 tons per acre) and their value is almost invariably considerably below that of teak. Practically the only possible method of extraction from the forests is by carting and their export is almost entirely dependent on railways or rivers sufficiently large to allow of floating attached to bamboos to buoy them up. It naturally follows that the area from which they can be extracted profitably is extremely limited, while in view of their comparatively low value and small tonnage per acre, there are few areas where mechanical transport such as railways, tramways, or even lorries on good metalled roads can be shown to be financially justifiable. It is estimated from average figures that the average volume of all trees of all sizes over 8" diameter per acre in Burma is 15 tons (750 cu.ft.). Out of this a considerable percentage probably 30 per cent. is too small to be of any utilizable value, while at least 50 per cent. of the remainder is composed of timbers which have no market value and many of which are unlikely ever to have any appreciable value. The balance of just under 5.75 tons contains a certain amount of teak, on an average probably 1.5 tons per acre which will always be cheaper to float out, where good floating streams are available; as they usually are. The balance of 4½ tons per acre can hardly justify any great expenditure on capital charges for extraction considering the small tonnage over which such capital charges must be distributed.

Matchwoods are a special case because the majority of them are floatable but I do not believe that that will materially increase the limit of accessibility. Unlike teak they are far from durable and any delay in utilizing the timber after felling leads to their destruction by rot or white-ants. They cannot therefore lie about in the forest awaiting a favourable rise in a floating stream. In addition to this the method of manufacture demands green timber, undiscoloured by sapstain or incipient decay. The time that elapses between their felling and utilization must, therefore, be as short as possible and unless they can be put into water very quickly after felling they would not endure the usual period it takes to extract more durable timber such as *pyingado* from the forest to the mill. I believe therefore that rather than the limit of accessibility being increased by their capacity for floating, the ordinary limit of accessibility would be considerably less than that of hardwoods such as *pyingado*, apart from all questions of relative value of timber, except in exceptional cases where the matchwood timber can be conveyed direct by water to the factory at any time of the year.

Leasing of forests.

This is no part of the working plan. Forests are leased by Government and the only points in which working plans are concerned are to fix the limits of working and the areas in which work is to be carried out and to see that the work is carried out in accordance with prescriptions.

ESTIMATES OF STOCK AND YIELD OF MATCHWOODS.

Insein Division.

Estimates are based on a 25 per cent. enumeration for the greater part of the area carried out in season 1925-26. Full details for the different species in diameter classes have been given already. The following is a summary only.

Eastern felling series.—(Mahuya reserve and Paunglin reserve of which stock in 29 compartments was enumerated and in 71 compartments stock was estimated roughly on basis of estimates in enumerated portion.)

Exploitable girth fixed at 5' at breast height or 18" diameter. Species enumerated *Sawbya, gwe, ma-u, didu, letpan.*

Reserve.	Area.	Stock of matchwoods 14 to 18" diameter and over.	Stock of matchwoods 18" diameter and over.	Remarks.
1	2	3	4	5
Mahuya Paunglin 29 Compartments enumerated.	Acres. 47,776	18,695	14,848	
Paunglin 91 Compartments and Kalitaw reserve 9 Compartments.	19,400	6,159	7,781	
	53,320	10,000	9,000	Less 'accessible' and not so well stocked. A rough estimate only.
Total	120,500	34,854	31,629	

Increment during the felling cycle of 15 years has to be reckoned. The usual calculation is that in the period of the felling cycle 80 per cent. of the class below grow up over the exploitable girth and that half of these will become exploitable during the felling cycle.

$$\text{Increment is } 34,854 \times \frac{80}{100} \times \frac{1}{2} = 13,840.$$

Total amount available during felling cycle = 45,469.

$$\text{Yield is } \frac{45,469}{15} = 3,031 \text{ or } 3,000 \text{ trees } 18'' \text{ diameter or } 5' \text{ girth and over.}$$

Stock of exploitable timber per acre allowing 1 ton of 50 cubic feet per tree 5' 0" girth and over: $\frac{31,629}{120,500} = .26$ tons per acre.

$$\text{Annual yield per acre of forest } \frac{3,000}{120,500} = .025 \text{ tons per acre.}$$

Western Felling Series.—(N. Hlaing Yoma Plains, S. Hlaing Yoma Plains, Magayi and Thabyu reserves.)

Exploitable girth 5' 0" at breast height or 18" diameter.

Species enumerated as for Eastern felling series but including *thitpok* which is probably unsuitable.

Area—46,941 acres.

Stock of matchwoods 14" to 18" diameter—21,203.

Stock of matchwoods 18" diameter and over—11,186.

Half increment as above

$$21,203 \times \frac{80}{100} \times \frac{1}{2} = 8,480 \text{ trees.}$$

Total available during felling cycle.

Note.—In this case felling cycle has been fixed at 20 years to agree with felling cycle for other timbers as it would be inconvenient to have two different cycles for one area.

$$11,186 + 8,480 = 19,666.$$

$$\text{Yield} = \frac{19,666}{20} = 983 \text{ trees, say } 1,000 \text{ trees } 5' \text{ } 0'' \text{ girth or } 18'' \text{ diameter and over.}$$

Stock of exploitable timber per acre allowing 1 ton of 50 cubic feet per tree 5' 0" girth and over.

$$\frac{11,183}{46,941} = .24 \text{ ton per acre.}$$

Annual yield per acre of forest—

$$\frac{1,000}{46,941} = .0213 \text{ ton per acre.}$$

Magwe Division.

Estimates are based on a few plots in which all species were counted and owing to the small area over which countings of these species were carried out the estimate cannot be depended on too much.

Only the following matchwood species were present to any extent and the previous estimates which includes *Binga* and *kuthan* should be omitted as these are no longer considered matchwood species:—

Didu, letpan, and gwe.

Average tonnage of trees 5' 0" in girth or 18" diameter and over per acre for all plots in division (allowing 1 tree=1 ton) is as follows:—

	Ton per acre.
<i>Didu and letpan</i>464
<i>Gwe</i>225
	<hr/>
Total	.689
	<hr/>

At the outside only 60 square miles can be considered accessible giving a total stock of 26,000 tons.

The annual yield would probably be about 2,600 tons.

Pyinmana Division.

Mynbyin reserve.—Estimates are based on about 5 per cent. enumeration and are not therefore very reliable. They will however serve as a good guide.

The following matchwood species were counted:—

Didu, letpan, gwe, ma-u.

Average tonnage of trees 5' 6" in girth or 18" diameter and over per acre is as follows:—

	Ton per acre.
<i>Didu, letpan</i>219
<i>Gwe</i>122
<i>Ma-u</i>088
	<hr/>
Total	.429
	<hr/>

About 80,000 acres may be considered accessible so that total exploitable stock would be 34,320 tons. The annual yield would probably be about 3,400 tons.

Yonbin and Palwe reserves.—Estimates are based on about 5 per cent. and can only be considered a rough guide to stock.

The following species were counted:—

Yemane, didu, letpan, ma-u, gwe, lettok.

Average tonnage per acre of trees 5' 6" in girth or 18" diameter and over is as follows:—

	Palwe.	Yonbin.
<i>Didu, letpan</i>	·22	·24
<i>Yemane</i>	·06	·015
<i>Ma-u</i>	·11	·06
<i>Gwe</i>	·1	·1
<i>Lettok</i>	—	·005
	—	—
	·49	·42

About 32,000 acres in Palwe and 26,000 acres in Yonbin may be considered accessible now so the total exploitable stock would be:—

	Tons.
Palwe	15,680
Yonbin	10,920

Annual yield would probably be about—

Palwe	1,500
Yonbin	1,000

Kaing and Yanaungmyin reserves.—Estimates are based on about 20 per cent. of the stock and are therefore fairly reliable. The whole area of the two reserves may be considered accessible.

Same species counted as in Palwe and Yonbin.

Average tonnage per acre of trees 5' 0" girth or 18" in diameter and over is as follows:—

	Kaing	Yanaungmyin.
<i>Didu, letpan</i>	·12	·19
<i>Yemane</i>	·13	·01
<i>Ma-u</i>	·55	·01
<i>Gwe</i>	·17	·065
<i>Lettok</i>	—	·005
	—	—
	·97	·28

Areas, stock and probable yield are:—

	Area acres.	Total stock tons.	Annual yield tons.
Kaing	13,341	13,000	1,300
Yanaungmyin	13,078	3,660	360

Total probable stock and yield in accessible areas in Pyinmana and Magwe divisions are as follows:—

Division and Reserve.	Tonnage of trees 5' 0" girth & over.	Probable annual yield.
<i>Pyinmana</i> —		
Minbyin	34,320	3,400
Palwe	15,680	1,500
Yonbin	10,920	1,000
Kaing	13,000	1,300
Yanaungmyin	3,660	360
	<hr/>	<hr/>
	77,580	7,560
<i>Magwe</i>	26,000	2,600
	<hr/>	<hr/>
GRAND TOTAL	103,580	10,160
	<hr/>	<hr/>

DATA FOR RATE OF GROWTH OF MATCHWOOD SPECIES AVAILABLE.

(Few data have been collected.)

Mandalay.

Letpan—

A few trees planted by the Irrawaddy Match Factory (Darwood) on Irrawaddy bank.

At 11 years old they averaged 30' high and 24" girth.

Henzada Division.—Alluvial bank in especially favoured area. Other plantations nearby not so favoured had not grown anything like half as big.

At 7 years old average 57' high and 36" girth. This is very exceptional growth.

Didu—

Prome Division.—A few trees in a plantation in dry forest with *myinwa* bamboos.

At 17 years old girth 1' 5", height 40'.

Ma-u—(*Anthocephalus Cadamba*)—

Insein Division.—Average annual girth increment of 14 trees over 5 years in a sample plot was 1' 14". Assuming this to be mean annual increment it would take about 53 years to grow to 5' 0" girth but growth at any rate earlier is much faster than this.

Tharrawaddy Division.—In a plantation 8 years old average girth 29", height 48'.

Yemane.—

Myitkyna Division.—7 years old plantation average 51' high, 20.5" girth.

In a very favourable locality.

Tharrawaddy.—5 years old plantation average 31' high, 11" girth; 36' high, 10.4" girth.

NOTE.—Few of the figures given above show an average annual increment in early years of much over 3" per annum and later it is certain that girth increment falls off considerably. In order to attain a girth of 5' 0" in 30 years an average mean annual increment of 2" would be necessary. In favourable localities it is probable that *letpan*, *ma-u* and *yemane* would attain this but it is by no means certain.

Distribution, frequency and characteristics of principal matchwood species in Burma.

Sawbya (Sterculia campanulata).—This must not be confused with *Tetrameles nudi flora* which is a large and rather common tree in moist forests with a light whitish non-durable timber which is commonly called *Sawbya* in many parts of Lower Burma. This is believed to be useless for matches.

Sawbya (Sterculia) is not a common tree except in Insein Division and possibly in neighbouring forests in South Pegu division and in Bassein. As far as I know it is not found in Upper Burma at all. The only other place it may be found in is Tenasserim. It has never been planted and nothing is known of its rate of growth or silvicultural requirements.

Bonmeza.—This is found generally throughout Burma but can nowhere be called a common tree. Its rate of growth is probably fast. It has never been planted and it is very doubtful if it would form a pure plantation successfully as it has a very light spreading crown and is adapted for growing in mixed crops.

Didu and *Letpan.*—*Didu* replaces *letpan* on all higher ground. It is fairly common throughout Burma in the drier type of deciduous forest with bamboos. It grows to a considerable size but is probably not as fast growing as *letpan*. It would probably not be suitable for growing in a pure crop as in the drier localities it frequents, its light, spreading crown would fail to give protection to the soil. *Letpan* is found essentially on newly formed river banks. It is never found on hilly ground and is one of the first species to appear on newly formed sandbanks in areas of good rainfall. Pure, and often evenaged, groups may be seen all along the main Irrawaddy especially round about Katha and Shwegu. Plantations have been made and in very favourable localities have shown astonishing growth but as it grows at its best on banks that are inundated at high rises of the river, there is always a danger of the sand on which it grows best being scoured away round the young plants, more especially on an area that has to be cleared of all grass and weeded until the *letpan* can get away above the grass. Nevertheless I am convinced that the best prospects of planting matchwoods on a large scale lie in taking up riverine areas for this purpose. *Letpan* is quite capable of growing pure, and is usually found pure on newly formed sandbanks with an undergrowth of grass.

Gwe.—A common tree all over Burma, but never found in great quantities. It has never been planted and little is known about its rate of growth.

Ma-u.—A common tree all over Burma and is one of the commonest species that occur in the regrowth after clearfelling on *taungya* cultivation. It is looked upon as a weed in plantations of valuable species as it so often comes in very thickly and, as its growth is very fast, it interferes with the growth of the plantation and has to be cut out. It should be very easy to plant but is not well adapted to growing pure over large areas as it has a light spreading crown and would afford little soil protection. Its place in nature is as an early constituent of regrowth on newly cleared areas and it gives way later before the growth of more tolerant species.

Taungmeok or *Sega (Alstonia scalaris).*—A comparatively rare tree which can hardly affect the outturn of matchwoods appreciably. No experience of its growth or planting requirements.

Setkadon.—Never a very common tree; it is usually found in evergreen forests along the banks of streams or in open places near water. The only place I know of it in any quantity is along the Irrawaddy above Moda. Although it occurs in Lower Burma I should say it is more frequent in Upper Burma. It should not be difficult to plant, as it has a fairly heavy crown and often occurs in pure groups in nature. Should make a good plantation in suitable moist localities.

Yemane.—Although a common tree throughout Burma it is nowhere plentiful and is in great demand for planking. Plantations have been made in many parts of Burma with considerable success. It is liable to damage by insect attack and it would be dangerous to plant large stretches of it pure.

**Evidence of Messrs. H. R. BLANFORD, Conservator of
Forests, Working Plans Circle, and C. H. PHILIPP,
Conservator of Forests, Central Circle, recorded
at Rangoon on Monday the 28th March 1927.**

Introductory.

President.—Mr. Blanford, you are Conservator of Forests, Working Plans Circle?

Mr. Blanford.—Yes.

President.—Mr. Philipp, you are Conservator of Forests, Central Circle?

Mr. Philipp.—Yes.

President.—I don't quite understand what this office exactly means.

Mr. Blanford.—First of all we have to enumerate or get some estimate of the stock and lay down future work for a period of years.

President.—That is to say you are the officer whose duty it is to find out the available supply?

Mr. Blanford.—That is part of the duty which I have to do.

President.—With reference to the notes you have sent in on working plans and on the species suitable for match making are the trees enumerated subject to any epidemics?

Mr. Blanford.—Very easily. One never knows until it actually comes.

Mr. Philipp.—There is that risk in every plantation.

President.—Do you have any epidemics in teak plantation?

Mr. Philipp.—Yes.

President.—Have you had any epidemics in the case of *Letpan*?

Mr. Blanford.—No.

President.—In the case of *Mäulettanshe*?

Mr. Blanford.—We have not got big areas.

President.—What about the cattle? Do they like these young trees?

Mr. Blanford.—That is not a serious danger.

President.—What are the risks to which a plantation is exposed besides the epidemic?

Mr. Blanford.—Fire is one.

President.—That is a risk that is attached to all forests.

Mr. Blanford.—Yes.

President.—Is there any special risk attached to a matchwood plantation?

Mr. Blanford.—The greatest risk is the impoverishment of the soil. Most of the matchwoods do not protect the soil.

President.—What do you mean?

Mr. Blanford.—One of the essential parts of plantation is soil protection and even teak does not protect the soil sufficiently. We are now finding in order to get good soil protection, that we have to under plant teak.

President.—What do you mean by "under planting"?

Mr. Blanford.—*Letpan* by itself gives a very light shade to the soil. The soil is apt to be very badly impoverished if there is no protection for it. It gets washed away.

President.—Would it be possible for you to do like this? You plant the first lot and as soon as it begins to afford some protection you can plant other trees, can't you?

Mr. Blanford.—We can do. Unless we get something which is going to give us some yield, it will be very expensive. That was the difficulty with teak. We have to find something that will afford the shade and at the same time give us a return. Otherwise the expense on the whole is unproductive.

President.—At present there is not at all any information on which any opinion can be based except to say that these trees do grow in the forests and that they might grow if planted.

Mr. Blanford.—Yes. Until recently there was no demand for match-woods at all. All the plantation work has been confined entirely to species we know that we can sell, viz., teak, *pyinkado*, etc. We know very little about match woods.

President.—If you have a demand now, you will begin to think.

Mr. Blanford.—Undoubtedly.

Mr. Mathias.—You are thinking of it already.

Mr. Blanford.—As a matter of fact, experiment has already been started this year I want to start an experiment with *Letpan*.

President.—As regards your division Mr. Philipp, Tounogo and Pyinmana are in your circle?

Mr. Philipp.—Yes, as regards Pyinmana. Tounogo is in Sitting circle.

President.—If a splint factory was started there instead of bringing the wood in the log do you think that there would be very great difficulty in obtaining factory labour?

Mr. Philipp.—I do not think so. The population of Pyinmana is very heavy and I should say to-day we can obtain labour.

President.—So that from your point of view it would be better if the wood was available in the vicinity, to make the splints there.

Mr. Philipp.—I should say the factory should be, if possible, on the spot because there is always a lot of trouble about wagons to enable the logs to be sent down to Rangoon.

Mr. Mathias.—If you produced the splints in the forests, you would also have to split your expert supervision into two parts—you would have to have your expert in the forest to supervise the splint machine and you would have to have another expert in Rangoon to supervise the rest of the machines, the peeling machines and so on—and therefore don't you think that would run away with much of the savings that you effect?

Mr. Philipp.—Of course Pyinmana is only 10 hours by rail.

Mr. Mathias.—But still as far as I could understand from the examination of Mr. Bawaney this match machinery requires a good deal of expert supervision and unless you had an expert on the spot to look after the splints it is possible your work might suffer.

Mr. Philipp.—If the necessary transport can be provided then of course Rangoon is the place.

Mr. Blanford.—Why not have the whole thing at Pyinmana?

Mr. Mathias.—Then you have to pay the freight on the chemicals.

President.—Freight on chemicals will be small.

Mr. Blanford.—There is always difficulty about getting trucks.

Mr. Mathias.—But then again you will have to transport your matches to the ports; there are the handling charges at the ports and so on. I think they send a lot of matches to India.

President.—What is understood in forest language by the term conversion, when we speak of the average timber?

Mr. Blanford.—Converting round logs into some other form of timber; it means planks, scantlings and other kinds of sawn timber.

President.—It does not mean rounds?

Mr. Blanford.—No.

President.—Steel Bros. Limited get reduced rates of freight do they not? They say the freight to Calcutta is Rs. 27 in the log, to Madras Rs. 34-4-0 and to Bombay Rs. 45 and they add "It will also, no doubt, be of interest that above rates are double what is charged for converted timber". Does that mean when it was cut up into smaller sections?

Mr. Blanford.—Yes.

Extraction costs.

President.—Have you any information as to the rates of wages in the forests?

Mr. Philipp.—Timber work is generally piece work; the man gets so much per tree.

President.—What is the rate in this circle of yours for, say, felling?

Mr. Philipp.—Felling and logging Rs. 1-4-0 per ton. I have nothing else to add to the replies that I have given in my answers to the questionnaire.

President.—Then the further labour involved would be one rupee a ton per mile?

Mr. Philipp.—That is for extraction.

Mr. Mathias.—You say Re. 1-4-0 per ton, do you weigh it?

Mr. Philipp.—No. It is by measurement. There is enormous difference in weight.

President.—What is the further expenditure to be incurred after felling and to take it to the river side or the railhead. In this forest you put it at about Rs. 5?

Mr. Philipp.—Rs. 5-12-0. That is the average for the Pynmana division.

President.—That is done by buffaloes, I suppose?

Mr. Philipp.—Yes.

President.—I suppose buffaloes are available in sufficient numbers?

Mr. Philipp.—Yes.

President.—On top of that what expenditure do you incur up to the railhead?

Mr. Philipp.—Loading on the railway.

President.—How much would you estimate that?

Mr. Blandford.—I suppose it is included in the freight.

President.—I take it the loading would be done by the railway?

Mr. Blandford.—To a certain extent.

President.—You take it to the goods shed and the railways do the loading, so that you have, simply got to carry it to the railway station and then there is the railway freight.

Mr. Philipp.—Yes.

President.—At this end probably the factory would have its own unloading place at the back of the siding?

Mr. Philipp.—Yes.

President.—And the freight you have given is Rs. 14, is it not?

Mr. Philipp.—Yes.

President.—Is there a uniform rate for all classes of timber or does it vary?

Mr. Philipp.—No. The timber trade is rather different because they charge by the wagon ton not by the weight of the log, that is, not by the amount put on what they call a 10-ton truck; it may hold only 5 tons of timber and we have still to pay for the 10-ton truck.

Mr. Mathias.—You cannot say how many tons a wagon will hold?

Mr. Philipp.—A wagon will hold about half as a rule.

Mr. Mathias.—When you say freight to Rangoon is so much.....

Mr. Philipp.—That is allowed for. The freight from Pyinmana for a ton of timber for delivery to Rangoon excluding royalty and excluding any profit is about Rs. 26. That is the mere cost of extraction and freight to which has to be added royalty and the contractors' profit.

President.—Contractors' profit you estimate at how much per ton?

Mr. Philipp.—25 per cent. on his capital; it would be about Rs. 5. At about Rs. 30 to Rs. 35 you can get soft wood delivered including royalty and profit.

President.—Do you think if the demand for this class of wood is increased, the cost of extraction would go up to any large extent?

Mr. Blanford.—It would probably go down. You have got contractors working in certain areas which are more or less scattered and they would bring the soft wood along with the hard wood and their costs will therefore go down.

President.—Has there been in the last 10 years much increase in the cost of extraction?

Mr. Philipp.—I should not think so.

Mr. Blanford.—I think there was, because the cost of daily labour has gone up very considerably.

President.—I should naturally expect that it should go up with the cost of living.

Mr. Blanford.—Day labour was 8 annas, now it is near a rupee.

President.—Is that Burmese labour?

Mr. Blanford.—Yes.

President.—Do you have much Indian labour in this forest?

Mr. Philipp.—Practically none.

President.—We were told by Steel Brothers that for factory labour they would have to employ Indians.

Mr. Blanford.—I should think so, to a certain extent.

President.—In this factory that the Swedish people had in Mandalay did they have to employ Indian labour?

Mr. Blanford.—I never saw it worked but I know that the packing and all that sort of thing were done by Burmese women.

President.—But I don't think there would be any difficulty in getting sufficient Indian labour for the factory?

Mr. Blanford.—I should not think so.

**Evidence of Messrs. A. H. M. BARRINGTON, Conservator of Forests,
Hlaing Circle, A. W. MOODIE, Deputy Conservator of Forests,
Depot and Agency Division, and D. J. ATKINSON,
Divisional Forest Officer, Insein Division,
recorded at Rangoon on Tuesday,
the 29th March, 1927.**

Introductory.

President.—You are the Conservator of Forests, Hlaing Circle, Mr. Barrington?

Mr. Barrington.—Yes.

President.—Mr. Moodie you are Deputy Conservator, Depot and Agency Division?

Mr. Moodie.—Yes.

President.—That is to say, you are concerned with the commercial aspect of the department, I suppose?

Mr. Moodie.—I am concerned with the selling of teak, supplying anybody wanting anything from the upcountry forest divisions and that sort of thing.

President.—Mr. Barrington, how long have you been in charge of the Hlaing circle?

Mr. Barrington.—Since July 1926.

Adamjee Hajee Dawood's reserve.

President.—Are you personally acquainted with the reserves that Messrs. Adamjee Hajee Dawood and Company have got?

Mr. Barrington.—No, Messrs. Atkinson and Scott know more about them!

President.—Have they taken a lease of these forests?

Mr. Barrington.—Yes.

President.—What is the area of that reserve?

Mr. Barrington.—127,000 acres.

President.—Has that been enumerated?

Mr. Barrington.—No, not in full. The total area of the Mahuya reserve is 47,776 acres and the total stock 18" and over is 14,848 trees each equal to 1 ton so that the tonnage per acre is 0.31 ton.

Dr. Matthai.—You mean the annual yield?

Mr. Barrington.—Yes.

President.—How much would 127,000 acres yield per year?

Mr. Barrington.—The calculation is that the Mahuya Paunglin yields 3,000 tons a year; Akkan, etc., has the same yield, and the total for the whole of the Insein Division is about 7,000 tons a year.

Dr. Matthai.—This new lease is also for fifteen years?

Mr. Barrington.—Yes.

Dr. Matthai.—That is the whole production for the Insein division.

Mr. Barrington.—The two leases roughly average 6,000 and the odd 1,000 is more or less reserved for the use of petty dealers.

Dr. Matthai.—So that Adamjee's concessions amount to about 6,000 tons a year.

President.—How many divisions are there in the Circle?

Mr. Barrington.—Five.

President.—What about the other areas?

Mr. Barrington.—North of Adamjee's concession is Tharrawaddy and Zigon which is further from the railway and so there has been so far no demand from that reserve.

President.—Tharrawaddy is not very far; how far would the forest be from the railwayhead?

Mr. Barrington.—Within 10 miles.

President.—So that Tharrawaddy division would not be too expensive?

Mr. Barrington.—No. That is largely a question of raiing to Rangoon. They can of course float but they nearly always rail.

President.—Are there floating facilities in the Tharrawaddy division?

Mr. Barrington.—Yes. But if they want to get the soft wood down to Rangoon fresh they would have to come out within a certain period. It would be convenient to take them out during the monsoon. In the case of teak even if it takes two years to arrive it does not matter.

President.—In that case how far will they have to carry to the water head from the felling site?

Mr. Barrington.—About three miles to the floating stream.

President.—Have you any reason to suppose that the Tharrawaddy forests may not contain the same quantities of matchwood?

Mr. Barrington.—I think there would be a falling off in Tharrawaddy. There are enormous number of teak plantations and the forests are being heavily worked in improvement fellings with the result that a lot of matchwood is cut out. The forests are being so heavily worked for all timbers that probably matchwood will be almost eliminated from the accessible compartments.

President.—Mr. Moodie, your department enumerates the forests, does it not?

Mr. Moodie.—The working plan party enumerates certain species. Unless there is a demand for a certain species we do not enumerate them.

Dr. Matthai.—I suppose in your division you deal generally in hard woods?

Mr. Moodie.—The Depôt and Agency division is responsible for the sales of teak only: the utilization conservator arranges sales of hard woods.

Quantity of match timbers.

President.—We want a rough estimate of the quantity available. One of the points we have to consider is what natural supplies you have, say for the next 20 years or so. We want to know whether the industry has enough supplies till plantation is undertaken.

Mr. Barrington.—It is a matter of guess-work. From here to Promé on the Irrawaddy, you could probably count on another 7,000 tons.

President.—That is one Circle.

Mr. Barrington.—Yes.

President.—And there are other circles about which we have got some information now.

Mr. Barrington.—Tenasserim division has considerably more.

Mr. Mathias.—The additional 7,000 tons, is that a conservative estimate?

Mr. Barrington.—That is all accessible to Rangoon.

President.—The best thing is to assume the cost at Rs. 30 a ton including the profit of the contractor and everything except royalty. That is the order of figures on which we might work.

Mr. Moodie.—Yes. Rs. 30 per ton is about what match woods costs delivered—Rangoon.

President.—Rs. 30 is not an economic limit,

Mr. Moodie.—No.

President.—If you can show that that is about the cost including everything except royalty, even on to-day's cost of manufacture which must be relatively higher compared to future costs it is not a bad proposition for the industry.

Mr. Barrington.—We have started research work on planting.

President.—That is a different aspect altogether. We have got to satisfy ourselves if we are to make any proposals for the protection of the industry that there are sufficient woods available in reasonable quantities to justify the protection of the industry. Then of course the next thing would be to consider the prospects of matchwood planting, so that if the forest authorities have said 20 or 25 years to look forward to, then the position of the industry would be considered fairly safe.

Mr. Barrington.—I should not like to give an estimate. There is heavy rainfall both in Upper Burma and in the Delta.

President.—In the Tenasserim Division it is heavier still.

Mr. Barrington.—Timber from it never comes into the Rangoon market. If you could get steamers from and to Tavoy, it might serve the purpose.

President.—The point is that the total cost should be in the neighbourhood of that figure. To-day for instance in this Rs. 30 is included considerable amount of carting and railway freight and in any case from Moulmein or Tavoy by sea the freight would not be very much higher than by rail.

Mr. Barrington.—I should think Tavoy or Moulmein would be as quite as promising propositions as Rangoon.

President.—You consider that Moulmein or Tavoy would be suitable sites for manufacture.

Mr. Barrington.—Yes.

President.—And the wood would be available there.

Mr. Barrington.—I don't think there is the smallest doubt about that. I think Moulmein is the best centre for planting. That is in regard to the potential value rather than the actual value.

President.—In what way would the forest have an advantage over Paunglin or Mahuya reserve as regards plantation?

Mr. Barrington.—It is entirely a different type.

President.—Do these different classes of trees grow there?

Mr. Barrington.—Letpan is the commonest.

President.—The following six species are considered suitable:—

1. Sawbya.
2. Bonmeza.
3. Didu.
4. Gwe.
5. Letpan.
6. Maulettanshe.

We understood that Yamane is most suitable.

Mr. Barrington.—Yamane is most suitable.

President.—It is subject to disease.

Mr. Mathias.—It is also I understand a valuable tree for other purposes.

Mr. Barrington.—Yes.

Mr. Mathias.—What I mean is this: If it is used for other purposes and the match manufacturers now desired to use it, there would be a good deal of competition and the price would run up.

Mr. Barrington.—Altogether they are paying Rs. 35 at the present moment in Rangoon. If they have plantations on a fairly large scale, they could get it at Rs. 15 to Rs. 20 a ton.

Mr. Mathias.—Would there be any objection to its use—I am not speaking of plantations—as it is naturally grown on the ground that it was required for agriculturists?

Mr. Barrington.—There are certain reserves set apart outside Rangoon.

Mr. Moodie.—Very little is used just now.

Mr. Barrington.—There are a number of reserves actually in places which are not easily accessible.

Sites for plantations.

President.—If you are to select sites for planting these classes of trees, you would naturally prefer Tenasserim division.

Mr. Barrington.—I think it should be just above Moulmein. On the other hand the Insein division has a good deal of land which could be planted up.

President.—This 7,000 tons you have mentioned may be taken as permanent supply.

Mr. Barrington.—Yes, in trees rather than tons.

President.—More or less permanent?

Mr. Barrington.—I should think there would be a slight drop in the tonnage.

Mr. Mathias.—You say that there are a number of areas in the Insein division which could be planted up. Is there any difficulty in obtaining labour?

Mr. Atkinson.—No; but there is only poor and inefficient labour.

Mr. Mathias.—I understood the limit of your planting operations is about 4,000 acres a year.

Mr. Barrington.—In this circle I don't think there is any particular limit.

President.—We were told that the labour available would not extend to about more than 4,000 acres.

Dr. Matthai.—I think what Mr. Watson said was 5,000 acres for the whole province.

President.—That is to say if you get the shifting labour.

Mr. Barrington.—One would have to use *Taungya* labour.

President.—Is there much of that in the Tenasserim division?

Mr. Barrington.—Yes.

President.—One thing is rather important. If possible the plantation should be concentrated.

Mr. Barrington.—Yes.

President.—So that either the wood is accessible if it is to be exported in the log from that one part, or it would be still better if a factory is established in the neighbourhood of that plantation.

Mr. Barrington.—Yes.

President.—There doesn't seem to be any great advantage in exporting wood in the log to India except that they might have some local market or some other advantage. Apart from those considerations, I think it may be as well to consider whether if plantation is undertaken, it should not be confined to more or less one locality on a fairly large scale where labour is available both for plantation and reasonable quantity for industrial purposes.

Mr. Barrington.—I don't think there is any doubt that it will be started in Insein. We have already got a market in Rangoon and the only thing we are up against is the testing of species.

President.—If you can select areas sufficiently large in the neighbourhood of Rangoon, it is still better. On to-day's requirements, supposing

India got all its wood from Burma, I think 100,000 or 120,000 tons would be required. That is just not allowing for any increase.

Mr. Barrington.—At present it is not possible on that scale.

President.—But eventually.

Mr. Barrington.—Adamjee's are prepared to take somewhere about 5,000 tons a year. That means 5,000 acres. If we get 5,000 acres and plant that up as soon as we know where we are, I think we can keep this factory going.

Mr. Mathias.—Adamjee would take about 11,000 to 12,000 tons if he doesn't import from the Andaman Islands.

Mr. Barrington.—I thought they told me that they were getting only 5,000 tons.

Dr. Matthai.—He gets 5,000 tons from Burma and there is a proposal that he should get 7,000 tons from Andamans.

Mr. Mathias.—12,000 acres would be impossible to plant up in the Insein?

Mr. Barrington.—It is a bit of a job.

Mr. Atkinson.—These areas on the railway side have been reserved for village supply. They will have to be on the Pegu side. I have discussed this with Mr. Scott and do not agree. Probably 10,000 acres or more would be planted near the railway.

Mr. Mathias.—They clear the coupes and you plant up.

Mr. Barrington.—That would be quite suitable.

Mr. Mathias.—I understood that there would be difficulty in clearing owing to the classes of timber there. Owing to the distance no contractor would find it worth while to clear them.

Mr. Atkinson.—I don't think so. It has not been done merely because that reserve on the east side of the Yoma has not been worked. That side of the division has been left to work itself. One could run through a road in any direction. It is almost flat and I don't think there will be any difficulty.

Mr. Mathias.—There will be no difficulty.

Mr. Atkinson.—None at all.

President.—That is a biggish area in the Mahuya reserve.

Mr. Atkinson.—90 square miles.

President.—That is about 5,000 acres a year. What cycle do you take?

Mr. Barrington.—30 years.

President.—What tonnage would you allow per acre?

Mr. Barrington.—25. I don't think that it is safe to take more than that. We are certain to be up against soils which are not suitable. It is practically impossible to get a large block of land which is entirely suitable.

President.—One of the suggestions was that you would select different localities. That means you have to bring all the logs down to one big centre afterwards. Whereas if you confined the plantation more or less to one locality, either you could have the factory in the locality or carry it elsewhere.

Mr. Barrington.—We should want over 5,000 acres. But 1,000 acres is the absolute outside limit that we can get for plantation in one division in one year.

Mr. Mathias.—Letpan will grow on the banks of the river. Sawbya on the other hand will grow on the slopes. The soil suitable for different trees might be in different localities.

Mr. Barrington.—The whole trouble in planting is to get the requisite number of cultivators.

President.—If you are to employ outside labour.

Mr. Barrington.—It is more or less a specialist job.

Mr. Mathias.—I just asked you whether there would be any difficulty in regard to labour.

Mr. Barrington.—I was contemplating an outturn of 5,000 tons. We are now talking of 100,000 tons.

President.—As regards the immediate requirements, it does appear that in the different scattered areas you may have a supply of 20,000 tons. You can get that from the whole of Burma without plantation.

Mr. Atkinson.—I don't think that we can get the whole outturn concentrated in one area.

President.—A big factory like the Western India Match Factory will require twice the quantity of what Adamjee's would require. We do not know what the position may be.

Mr. Mathias.—Do you think that plantation can be undertaken for 20,000 tons?

Mr. Barrington.—Yes. 750 acres a year—that might possibly be worked.

Mr. Moodie.—That is for one division, viz., Insein division.

Dr. Matthai.—There would be no difficulty as regards labour?

Mr. Barrington.—It is extremely difficult to say because nothing like that has been attempted before.

Mr. Atkinson.—There would certainly be difficulty but we might be able to get labour for that.

President.—Do you suggest that 20,000 ton unit would be a suitable one for a division for plantation in the Tenassarim and Insein divisions?

Mr. Barrington.—I should say that we could work up to 20,000 tons a year from plantations in three different centres. You will have to remember that we have not got accessible land for a plantation covering so many acres in one block. The trouble will be to get so large a concentration as that. It means 200 families. It will take some years to recruit these people and get them removed from other places and concentrated in one place.

President.—We are taking a fairly long view. I don't want you to do it in a short time. You can do it in 15, 20 or even 30 years.

Mr. Barrington.—I think that that is about the maximum that we can do.

Mr. Atkinson.—We do not know what we are going to let ourselves in by planting species in these areas in the way of disease.

President.—All these things have to be studied.

Mr. Atkinson.—You ask for trouble by undertaking plantation in a compact area.

Dr. Matthai.—There is less liability of getting any disease if you mix the species?

Mr. Atkinson.—Yes.

President.—Letpan is not as suitable according to our present information as the other species but it grows almost anywhere on the alluvial soil.

Mr. Barrington.—Yes, on sandy soil.

President.—If you eliminate Letpan from this special plantation and have it where it naturally grows, in that case a much smaller quantity may suffice. Sawbya, Malettanshe and Gwe are supposed to be very good for splints.

Mr. Barrington.—Gwe is too soft for veneers.

President.—Gwe is good for splints. He thought that Yamane is also good.

Mr. Barrington.—It is very easy to grow.

President.—It would be for the forest people to select the area having regard to the costs and the species that may grow together.

Mr. Barrington.—I don't think that there is the smallest doubt that we can grow at Rs. 10 per ton.

President.—Supposing you selected this area, then it would pay everybody to get the communication improved. In that case you would reduce the cost of transport and get more royalty.

Mr. Barrington.—I believe that the civil authorities are going to have a pucca road out there.

Dr. Matthai.—When you speak of 750 acres, do you mean entirely reserve lands?

Mr. Barrington.—Yes.

Transportation.

President.—In the Mahuya reserve, we have been told that practically in the wet months they can float logs.

Mr. Atkinson.—Yes.

Mr. Barrington.—They can float the logs in any direction, that is the difficulty.

President.—In the dry weather they have got to bring it down to Hleghu.

Mr. Atkinson.—Yes.

President.—They can rail the logs from there.

Mr. Atkinson.—Yes.

President.—There must be an alternative method of transport for the dry weather. If you have an alternative method, say a light railway, you may just as well use that during the monsoon.

Mr. Atkinson.—Floating is a good deal cheaper. It would be very expensive to put up a light railway. The whole of that area is under water up to one foot. Only boats can go then.

President.—In the dry weather you will have recourse to carts.

Mr. Atkinson.—Yes. If the road was reasonably good they could probably use 4-ton lorries which would presumably be the cheapest method.

President.—Hleghu is about 25 miles from here.

Mr. Atkinson.—Roughly that.

President.—And the remainder would be about 30 miles.

Mr. Atkinson.—Altogether from Rangoon or what? It is only 18 miles from Paunglin to Hleghu.

President.—That is outside the forest.

Mr. Atkinson.—Yes.

President.—Anyhow for a limited plantation it would be a suitable area.

Mr. Atkinson.—Yes, from the point of view of extraction.

President.—Who is the Conservator in charge of the Tenassarim Circle?

Mr. Barrington.—Mr. Milner.

President.—What would be the lead from the forest to Moulmein or Tenassarim, if you had a plantation there?

Mr. Barrington.—In the Tenassarim Circle we have not got large reserves.

President.—In that case for plantation what would you do?

Mr. Barrington.—That brings in the question of land, the cost of which will be some Rs. 10 per acre.

Mr. Moodie.—Moulmein has got good streams in which you can float.

Dr. Matthai.—On private land there would be the question of land revenue.

Mr. Barrington.—We would not take up anything which pays revenue to Government. We will take up more or less waste land.

President.—For waste land you would have to pay some compensation.

Mr. Barrington.—Yes.

President.—Is it central Tenassarim or southern Tavoy?

Mr. Barrington.—That is all Tenassarim. That is a division which I have not seen. I understand that there is a good deal of match wood there. That is just the type of forest which is likely to contain match wood more than any other. Mr. Robertson knows all about Tenassarim. He has just been down there. He is one of the three officers who made a special examination of the question of extraction of jungle weed.

President.—Has he written a report on that?

Mr. Moodie.—He has just returned from that place. He is writing one.

President.—There are really no insuperable difficulties about plantation provided you don't have to undertake more than 750 acres in your division.

Mr. Atkinson.—No.

Mr. Barrington.—In Hlaing Circle we can do that.

Conditions of growth of match wood trees.

President.—Who is supposed to be studying the conditions under which these soft wood trees grow?

Mr. Atkinson.—I am planting about a dozen species this year. They have not gone in yet. They will go in the reserve on the other side of the Yoma. It is just an experimental plot covering about 19 to 20 acres.

President.—Why have you selected that area?

Mr. Atkinson.—Most of our workers are on that side at present.

President.—That runs along the railway line.

Mr. Atkinson.—Yes.

President.—Is the soil quite suitable?

Mr. Atkinson.—Yes.

Dr. Matthai.—Would the soil be representative of the whole area, that is to say practically any kind of soil is included in it?

Mr. Atkinson.—Yes. More or less you get an alluvial soil along the stream running up, as I said, to the Yoma hills.

President.—Has the area been cleared?

Mr. Atkinson.—It is being cleared and in the rains we will plant it.

President.—If you were to undertake plantation what would you do? Would you do clear felling?

Mr. Barrington.—Yes.

President.—I suppose in one year you cut the trees down and then they are burnt.

Mr. Barrington.—It is cut down in February and is burnt the same year, in April.

President.—You can use it in the same year?

Mr. Barrington.—Yes. Incidentally we know all about maulettanshe. It grows in every forest. I don't think there will be very much difficulty in planting that: It grows very fast.

President.—That is supposed to be very good for splints.

Dr. Matthai.—What is the period of growth?

Mr. Barrington.—I am not sure, but probably it is about 30 years, I think. We have to cut it out of our teak plantations very often as it outgrows teak.

President.—Maulettanshe splint is quite good in appearance and you say this maulettanshe tree grows easily?

Mr. Barrington.—It grows up like a weed and we have to cut it out yearly. If you have a plantation, maulettanshe often covers the whole ground. It grows very quickly.

President.—In order to prevent disease from spreading you find it necessary to cut down some of the species which are suitable for splints, so

that it does appear that these trees grow in this reserve all right. Whether it would grow in other parts of Burma that has to be proved.

Mr. Barrington.—That is so.

President.—What about sawbya? It grows in larger quantities than any other species, I suppose?

Mr. Barrington.—Faster? If certainly isn't the most common species, it may be the common match wood species.

President.—I take it this note of the 24th of March must have been prepared rather in a hurry for us. I asked Messrs. Robertson and Blanford for information on this point. I am not so sure that this argument that teak and pyinkado are the more valuable trees assumes that there is more market for teak than match wood.

Mr. Barrington.—I should say if they are to be made available in sufficiently large quantities they ought to be planted.

President.—First of all let us take the natural regeneration.

Mr. Barrington.—The natural growth in the forest reserves is so scattered that it would cost a great deal to extract them.

President.—I do not know what the nett royalty on teak or pyinkado amounts to, but if you took Rs. 15 for pyinkado and Rs. 20 or 25 for teak . . .

Mr. Barrington.—The average will be somewhere about Rs. 30 even for pyinkado and more for teak.

President.—If you take Rs. 30 and if you take the natural growth at 150 years, and then take 30 years for the match wood and Rs. 10 as royalty, then this match wood is more valuable than teak wood taking the natural growth. Up to now of course you have had no market, that is admitted, but the moment you are beginning to get a market, at Rs. 12-8-0 certainly match wood is more remunerative.

Mr. Barrington.—Can you rely on Rs. 12-8-0.

President.—You can rely on Rs. 12-8-0 provided the total cost does not exceed Rs. 40 on to-day's costs. You have learnt the business of selling match wood.

Mr. Mathias.—If you had a match wood plantation you could fairly rely on a very much bigger royalty, as the cost of extraction would be less.

Mr. Atkinson.—In a teak plantation we would get up to Rs. 60 on a 80 year rotation.

President.—You have got this natural resource in teak, but I think the sooner we get rid of this idea that it is the teak that pays the Government and nothing else does, it is better for all concerned.

Mr. Barrington.—We are sure about the market for teak, while we are not sure about the market for other timbers.

President.—That is perfectly true, but we are now assuming that you have got a market for the match wood. Nobody really knows yet what the natural resources of the forest are in matchwoods even to-day and we cannot say what the value of the wood is. Let me put it to you this way. Take the Mahuya reserve for instance where this match woods grow. You have given the figures for Pyinkado; they are 25 per cent. more than match woods and the wood is heavy. Now take a mixed reserve, how many tons of teak would you get out of that?

Mr. Barrington.—The average is between a ton and 1.5 ton to an acre. An average acre has got about 15 tons of possibly 30 species, of that teak and pyinkado are about 1 and 1.5 tons.

President.—And the match wood is about a third?

Mr. Barrington.—Yes.

President.—If you take the rotation of teak and pyinkado as 100 or 150 and take the rotation of match wood as 30 years, the commercial value is not very much smaller.

Mr. Moodie.—We are going into it and will see how it works out.

President.—I would like you to work out all these figures as regards this particular reserve and to see how teak and pyinkado fare with regard to rotation, and the rates you expect to get in comparison to match wood, assuming that there is a steady demand for match wood. I am talking merely of the natural forest and will come to plantation later.

Mr. Atkinson.—Do you accept 30 years as the natural rotation for these match woods?

Mr. Barrington.—I think 60 is the figure for natural growth. Even so I admit on paper you might make it look like a good financial proposition, but I don't think any forest officer would follow that very far. We have got to look about a century ahead

President.—Get rid of a hearsay like that, Mr. Barrington!

Mr. Mathias.—Do you say the match wood takes 60 years to grow?

Mr. Atkinson.—I think so. I should say nearer 60.

Mr. Barrington.—15 years felling cycle leaving everything under 4½ feet.

Mr. Mathias.—Extractions made in Japan seem to indicate a rotation of 20 years.

Mr. Barrington.—I admit by planting it may very likely come down to 20 years. You have got to average out all those which are suitable and those which are not, and for those which are really suitable 20 years is by no means optimistic. But you have got to put it much higher because there are large blocks of soil where the trees are not suitable.

Return on plantations.

President.—As regards plantation Mr. Watson has given us a statement. If we take 20 years rotation, and not 25 as Mr. Watson gives it, it comes to 10·74 royalty to give you a return of 4 per cent. compound interest.

Mr. Barrington.—It is very high cost.

President.—If you take the average at that figure it may come to Rs. 8 or 9 on 30 years rotation.

Mr. Barrington.—I think that is about right.

President.—That would cover all your costs and pay you compound interest and everything excluding the cost of the land. In the case of a teak plantation this cost would go on for 80 years.

Mr. Barrington.—You can get up to 50 tons in 80 years, that is on the best soils.

President.—What royalty would you have to get on that?

Mr. Barrington.—At 4 per cent. compound interest it would have to be in the neighbourhood of Rs. 1,200 an acre. Near Rangoon you will get about Rs. 3,000. In match wood you get Rs. 250 in a much shorter period.

President.—That is to say if you get Rs. 10 but the point is, in a case of this kind where you have a plantation which would reduce the cost of transport, the margin of the royalty is higher. In the case of teak, even if you planted teak you would not plant it with reference to its accessibility to a factory but here you would be doing that, and therefore supposing the total landed cost was going to be Rs. 35, which leaves you Rs. 23, if these costs were reduced to Rs. 15 which they might very well be, than in that case your royalty may go up to Rs. 15. In that case it does seem to me that a plantation of matchwood is on the whole, from the Government point of view, a much better commercial proposition than teak.

Mr. Barrington.—I don't think they are alternative, are they?

President.—I don't say alternative, but I say too much attention has been paid to teak.

Mr. Barrington.—I have not the slightest objection to having plantations for the necessary development of matchwood, but in the meantime it would take two or three years to see how they grow.

Mr. Mathias.—It is desirable at any rate that the forest department should make experiments and there is no opposition to that on your part?

Mr. Barrington.—Not the slightest. As a matter of fact experiments were taken up as far back as 1919 as regards sawbya, letpan and so on.

Dr. Matthai.—In the Mahuya reserve are hard woods being worked just now?

Mr. Atkinson.—Not now. They will do it from next year. We have got the new additional working plan which is about to be sanctioned.

Dr. Matthai.—Then it would be in the hands of different contractors.

Mr. Barrington.—It would probably be in the hands of small contractors.

Dr. Matthai.—But you have different sets of contractors working in the area, some on hard wood and some on soft wood.

Mr. Barrington.—Yes.

Dr. Matthai.—Would it cause any difficulty?

Mr. Barrington.—No.

Dr. Matthai.—What about the traffic down the stream?

Mr. Barrington.—Hard woods don't come down by stream at all.

Mr. Atkinson.—They come by cart.

Mr. Mathias.—Won't they float?

Mr. Atkinson.—No.

Dr. Matthai.—They can be rafted.

Mr. Barrington.—Yes, with bamboos where there is a fairly good stream.

Mr. Mathias.—There is not much teak in the Mahuya reserve.

Mr. Atkinson.—Not in the Mahuya but there is quite a lot in the Paunglin reserve.

Mr. Mathias.—There would be no difficulty about clearing out all the hard woods.

Mr. Atkinson.—None at all. Where we have done felling and clearing in the accessible areas, we have made something like Rs. 40 an acre.

Mr. Mathias.—It would be a profitable business for Government to clear the hard woods, supposing the plantation of match woods were undertaken.

Mr. Atkinson.—I should think so.

President.—That is to say you have no difficulty in disposing of all the timber.

Mr. Atkinson.—We have not tried Mahuya.

Mr. Moodie.—There is not likely to be any difficulty.

President.—It would not be necessary to burn it all up.

Mr. Atkinson.—No.

Mr. Mathias.—I suppose as against the cost of plantation we might reasonably take a proportion of the royalty which Government got for hard woods in those particular forests. If you were to fell and clear, you would not only cut hard woods of 5' girth, but also trees of smaller girths. You might take that against your cost of plantation.

Mr. Barrington.—On the contrary it will be cutting the capital.

Mr. Atkinson.—That is always presupposing that plantation of match woods would be a success.

Mr. Mathias.—You don't think it would be fair to take a proportion of that as against your cost.

Mr. Barrington.—The generally accepted view is that the old crop is separate and any cutting into it can only be credited to it and not to a new plantation.

Labour required for plantations.

President.—In these plantations how many people would you require per acre to do the planting?

Mr. Barrington.—Shifting cultivators generally do 3½ to 4 acres.

President.—What does a family consist of? Do you take it as three or four people?

Mr. Barrington.—Generally husband, wife and a son.

Mr. Moodie.—And a few bachelors.

President.—You require one person really speaking for one acre.

Mr. Barrington.—Yes, one man. Some of them have families; some of them don't have families.

President.—What do they do?

Mr. Atkinson.—They live in the middle of the areas they are cultivating.

President.—And then they go on.

Mr. Atkinson.—After reaping the crop (October and November) they leave the old plot and start selecting the next.

President.—Here the plantation would mean they would have to be there constantly.

Mr. Atkinson.—Yes.

President.—You cannot have a shifting population.

Mr. Barrington.—They only stay on in a patch for cultivation.

Mr. Moodie.—Once they reap their crops, they are not interested in it.

President.—When you are doing this plantation, they won't have other areas to cultivate.

Mr. Moodie.—We try and find work for them in the forests.

President.—It means this: You would have to have a sort of constant population which would have to give up its habits if you are to use the same population to do the work of plantation. Does it not follow?

Mr. Atkinson.—After we have done plantation, we should not have enough work for these people except during the rains.

President.—Supposing you did 20,000 acres, then you would go on planting 750 acres a year.

Mr. Atkinson.—Yes.

President.—Will that same population be available for 15 years?

Mr. Atkinson.—Yes. Each year they start a new plot. As soon as they finish with that, the following year they go on to the new area, that is the next 750 acres. The same lot of men plant.

President.—They would cultivate that area only for one year.

Mr. Barrington.—Yes.

President.—And then they move on.

Mr. Barrington.—It is not permanent cultivation in any sense. While they plant our trees, they will plant their own crops and the whole thing is done together.

President.—What crops do they grow?

Mr. Barrington.—Hill rice chiefly.

President.—That doesn't interfere with your own plantation.

Mr. Barrington.—No.

Mr. Mathias.—You charge them nothing as rent for the land.

Mr. Atkinson.—No. They are paid about Rs. 12 an acre.

Mr. Mathias.—And they get their own crops.

Mr. Atkinson.—Yes. We generally pay their taxes.

President.—I take it for plantation of 20,000 acres you require 200 families.

Mr. Atkinson.—More, one for 3½—4 acres.

President.—That doesn't seem a frightfully big number.

Mr. Atkinson.—No.

President.—Supposing you have to do it by other labour.

Mr. Atkinson.—That would be very much more expensive. We should have to pay daily wages.

President.—Then how many labourers you would have to employ?

Mr. Barrington.—So far as I remember it costs Rs. 28 in the first year as against an average of Rs. 16. 28 working days per acre—that is an average figure for Rs. 28 a month. We pay *taungya* cutters Rs. 12 and the tax comes to Rs. 4 making a total of Rs. 16.

President.—That is in the first year.

Mr. Barrington.—In the second year I should think Rs. 6 to Rs. 7 would be the cost of weeding, because the area would be weedy and dirty if it not kept under proper agricultural system. Mr. Watson has lumped together the cost for 10 years and I have tried to keep separately.

Dr. Matthai.—Rs. 16 represents clearing and planting.

Mr. Barrington.—The payment of results when we take over *plus* capita-tion tax and any other tax due to Government. We don't strictly pay for the operations. We pay for the trees, handed over, i.e., an average of Rs. 1 per 100 seedlings and there are 1,210 per acre.

President.—You estimate the cost as Rs. 257.

Mr. Barrington.—Compound interest right up to 30 years.

President.—How much does the cost of formation come to?

Mr. Barrington.—Up to the end of the first 10 years if they were successful, it should be about Rs. 30, but I have given the average at Rs. 50.

President.—It would bring the royalty on a 30 years' rotation at Rs. 6.85.

Mr. Barrington.—In the neighbourhood of Rs. 200.

President.—We will call it Rs. 200 to Rs. 240. That would bring the royalty down to less than $\frac{1}{4}$ th on a 30 years' rotation on these figures.

Mr. Barrington.—It does.

President.—Anyhow even if you have to employ other labour, it would not increase the royalty by more than couple of rupees.

Mr. Barrington.—I think it would still pay, but it would be very much more difficult, because it would require very much more supervision. Then there is the question of staff. You will have to have European Assistants in the first year it will be very difficult.

Mr. Mathias.—This total cost of Rs. 147 in your calculation on page 4 of your note is for 30 years.

Mr. Barrington.—30 years and 25 tons.

Mr. Mathias.—And Rs. 2 is for supervision.

Mr. Barrington.—Yes. I think Mr. Watson's 40 tons is liberal as an average. There is no doubt that we can realise that, if we stick to the best soil.

Mr. Mathias.—It makes a difference of about Re. 1 a ton if you take 30 tons. He takes 35 tons for 25 years and 40 tons for 30 years.

Mr. Barrington.—That is a high average.

President.—You are disposed to take 30 years and 25 tons, is it not so?

Mr. Barrington.—Yes.

President.—Then your figures would go up to Rs. 10. You don't get more than 4 per cent. per acre on teak plantation.

Mr. Barrington.—No. There is no financial objection provided we get Rs. 10.

President.—If you were to employ other labour, I suppose the cost may go up by Rs. 30 or Rs. 40.

Mr. Barrington.—I should think by about 50 per cent.

President.—To that Rs. 257 you will have to add Rs. 173 bringing the total to Rs. 330. That would just push up the royalty to Rs. 13 instead of Rs. 10.

Mr. Barrington.—Yes.

President.—You might be on surer ground. If you are to do it on a bigger scale the only method would be to employ other labour.

Mr. Barrington.—I am not sure. I should try and get as many *Taungya* cutters as possible. They leave the ground in a much better condition.

President.—Is this *Taungya* population reluctant to move from one division to another?

Mr. Barrington.—Even 10 miles away it is rather difficult.

President.—You have to confine yourself more or less to the same area to get the population.

Mr. Barrington.—I could get a certain number from Mahuya.

President.—Are they hill people?

Mr. Barrington.—Many of them are Karens.

Dr. Matthai.—The reason why they shift from place to place is that they cannot raise a crop after a certain number of years on the same land.

Mr. Barrington.—Roughly speaking they like to have 15 years interval between cultivation, leaving the jungle to grow up 14 years for each year's cultivation.

Estimate of supply of match wood trees.

President.—In paragraph 4 you talk of Mr. Scott's estimate. I am not able to follow the criticism. You say: "That the estimated annual outturn for all match woods for the whole division is 7,000 trees of 4½ feet."

How do you get that?

President.—The figures supplied by Mr. Watson show more trees. I don't know whether I am wrong. As regards this 287,251 acres that you have given, is that for the whole of Insein?

Mr. Barrington.—Yes.

President.—The number of trees I think is more than that.

Mr. Barrington.—This is the yield per year. Obviously you cannot cut away all the trees in one year.

President.—Mr. Watson says in his note that the total stock of available trees may be taken as follows:—

Paunglin—7,781 trees of 18" and over.

Mahuya—14,848 trees of 18" and over.

Western Plains—11,186 trees of 18" and over?

Mr. Barrington.—Is that the total ground stock?

President.—No. It is the enumeration I think.

Mr. Barrington.—You can take the annual outturn as 7,000 per year, viz., 3,000 each for Mahuya and Paunglin and 1,000 for the Western Plains.

President.—That is what you say.

Mr. Barrington.—Yes.

President.—He takes a 15 year cycle and takes all trees from 8 to 12 inch. diameter.

Mr. Barrington.—The assumption is that you get the same number of trees 15 years hence. There will be a slightly diminishing tonnage, because the very large trees will have to be taken out first.

President.—Apparently there has been some felling done in this reserve because the bigger trees are much fewer than one would expect. I suppose that Lim Chin Song and other people worked that.

Mr. Barrington.—Yes.

Dr. Matthai.—If you look up Table II showing the estimated number of match wood trees of 8" diameter and over, you will see against Sawbya the number of trees of 16" to 20" is 8,000 whereas the number of trees of 20" to 24" diameter is about 3,000.

Mr. Barrington.—Teak also grows more or less in the same proportion.

President.—Of course you cannot tell how long these trees would take to grow from 12 to 16 inches to 16 to 20 inches?

Mr. Barrington.—No.

Dr. Matthai.—Do these trees grow at a uniform rate?

Mr. Barrington.—Very irregular.

Dr. Matthai.—Do they grow fast in the early stages?

Mr. Barrington.—We could not tell you that, probably they do.

President.—Then, in paragraph 6, there are some figures missing.

Mr. Barrington.—I have not been able to get them yet.

President.—Mr. Blanford told us that this plantation was extremely inaccessible.

Mr. Barrington.—Yes.

President.—If you have a plantation in an inaccessible area how would the data help you?

Mr. Barrington.—It is simply a question of soil.

President.—If you take the best soil.

Mr. Barrington.—We want to know the rate of growth. It does not matter whether the plantation is accessible or not.

President.—The soil is particularly favourable.

Mr. Barrington.—Yes.

President.—The best thing would be to take an average soil and a reasonably accessible locality.

Mr. Mathias.—It is not a commercial experiment.

Mr. Barrington.—No.

Dr. Matthai.—The dimensions for 1927 would represent 8 years' growth.

Mr. Barrington.—It was planted in 1919 and I saw it in 1925, that is after 6 years' growth.

President.—I see in this reserve Letpan does not grow very much.

Mr. Atkinson.—No, not in the Mahuya reserve.

President.—How about the Tenassarim division?

Mr. Atkinson.—There is a lot of natural Letpan down that side.

President.—The quantity must be very large.

Mr. Atkinson.—I don't know whether the quantity is large in the sense in which we are using. It will be only hundreds of tons and not thousands of tons.

President.—It is a tree which is very big.

Mr. Barrington.—Yes.

President.—Would you get on an average more than a ton per tree?

Mr. Barrington.—It depends on the minimum girth. In the case of really big trees, it will be more than a ton per tree.

President.—You have no idea even as regards Letpan as to the quantity available?

Mr. Barrington.—I am afraid not.

President.—Can you apply this method—to enumerate the trees in a particular area and then assume that that proportion would apply to the rest of the reserve? As regards Letpan can you do that?

Mr. Barrington.—I don't think that there are any estimates except in the case of Paunglin and Mahuya. We know nothing about stock,

President.—Of course we would have been very glad if we had some idea of the total quantity of Letpan available. Though it is not suitable for splints, it is all right for veneers and packing cases.

Mr. Barrington.—Are you speaking generally?

President.—Yes. The Insein soil does not lend itself for the growth of Letpan.

Mr. Barrington.—No. It is distinctly a tree which grows easily on sandy alluvium soil.

Dr. Matthai.—If you had a fresh plantation along the river side, how many years would it take?

Mr. Barrington.—It depends on the rotation. Of course given suitable soil, you could run to 20 to 30 tons in 20 years.

President.—Would you have to employ *taungya* labour?

Mr. Barrington.—Something similar but not quite the same thing. On these river banks there is less cutting to be done.

President.—In paragraph 7 you talk of reservation of over 12,060 acres of soil of this kind for grazing at a cost of Rs. 1,20,239. Do you mean acquisition?

Mr. Barrington.—The reservation is under the Forest Act. It amounts to acquisition.

President.—That is to say, you declare that a certain unreserved forest has become a reserved forest.

Mr. Barrington.—Yes, by buying up rights at Rs. 10 per acre of cultivation, cutting, felling, etc.

President.—Do you take those rights into account?

Mr. Barrington.—Yes. That is the sort of area which is favourable for planting *Didua Letpan*.

President.—That is in Pinyinmana Division.

Mr. Barrington.—Yes.

President.—Do you have to take actual legal proceedings?

Mr. Barrington.—A Forest Settlement Officer can pass orders subject to the appeal to the Commissioner and the local Government.

President.—That is purely a forest procedure and not civil.

Mr. Barrington.—Yes. It is done by a Forest Settlement Officer.

President.—It is not the same thing as the land acquisition procedure.

Mr. Barrington.—No, it is a different procedure.

President.—You adopt more or less the same method. You give them notice.

Mr. Barrington.—Yes, three months' notice.

Dr. Matthai.—You adopt the same method of assessing the value of the rights.

Mr. Barrington.—Yes.

President.—I think it costs some money—Rs. 5 or Rs. 10 as the case may be.

Mr. Barrington.—Yes.

Mr. Mathias.—There is no appeal to the civil court.

Mr. Barrington.—No.

Dr. Matthai.—Why do you say "we must work for a minimum charge of Rs. 10 a ton"? I thought that you would work for a maximum.

Mr. Barrington.—Our charges must be cut down so that Rs. 10 would pay.

Dr. Matthai.—That is the minimum you would assume.

Mr. Barrington.—Yes, unless we get Rs. 10 it is not worth trying.

President.—Your estimates seem to be more or less on the safe side. You take first of all 30 years rotation and then you cut down the yield to 25.

Mr. Barrington.—I have seen and done so much planting that I don't want to be too optimistic.

President.—If Government were to adopt your figures, they would be on the safe side.

Mr. Barrington.—Yes.

President.—Mr. Moodie, are you in closer touch with the Match Industry now than before?

Mr. Moodie.—I have not taken any interest at all in the match industry. I am only concerned with the selling of teak in Rangoon.

President.—Who is supposed to study the question of match wood?

Mr. Moodie.—It is Mr. Robertson.

Mr. Mathias.—He is the Conservator of Forests, Utilization Circle.

Mr. Moodie.—Yes.

Mr. Mathias.—He has nothing to do with the actual investigation and marketing of soft woods.

Mr. Moodie.—He is supposed to do the investigation and records work. Soft woods are sold as standing trees of territorial Conservators.

Dr. Matthai.—Is the Tavoy Division part of the Utilization Circle?

Mr. Moodie.—Yes.

President.—Do you do much business in soft wood?

Mr. Moodie.—None at all. Government is extracting teak timber. It is done by our contractors and sent down to Rangoon.

President.—I understood that Government was paying more attention to the soft woods.

Mr. Barrington.—Yes, from the research point of view, that is to say testing strength and trying to develop markets for that. It is not done on a commercial scale at all.

President.—What I wish to know is that if plantation is undertaken who would be put in charge of it?

Mr. Barrington.—The Divisional Forest Officer would be put in charge of it, with a good deal of advice from the Sylviculturist.

President.—Wherever plantation is undertaken, the Divisional Officer of that area would be in charge of it.

Mr. Barrington.—Yes.

The selling of match wood.

President.—As regards the disposal of match wood who will be responsible?

Mr. Barrington.—I would put it up to tender and accept the best subject to the approval of the Forest Ministry and of the Finance Ministry.

President.—The selling agency is the Chief Conservator really speaking.

Mr. Barrington.—It depends on the amount being sold.

President.—What is the limit of the Chief Conservator's powers.

Mr. Barrington.—The contract value of Rs. 50,000 for one year is the limit.

President.—So that any long term license will have to go to the Ministry?

Mr. Barrington.—Yes and to the Finance Member.

President.—The question may arise here as regards the limitation of the right to sell, that is to say it may be necessary to provide that the wood is sold to people engaged, *bonâ fide* in the manufacture of matches only. Such control I think would be used in the first instance by the Forest Minister and then by the Finance Department?

Mr. Barrington.—Finance is only concerned when we accept a lower tender against a higher.

President.—And then the Finance department may come into conflict with the Industries department. Let us understand exactly what the position

may be in that case. Supposing the Forest Minister, who is in charge of forests as well as industries, came to the conclusion that it would be in the interest of the country to sell this wood, say, at Rs. 10 a ton to a local manufacturer, but the foreign manufacturer comes and tenders through somebody else and is prepared to offer Rs. 20 a ton, then the Finance department may come in and say "we will accept Rs. 20 a ton because we get more money." Is that the position?

Mr. Barrington.—If the Forest Minister is strong he will fight against it.

Mr. Mathias.—Are there no delegation of powers?

Mr. Barrington.—There are delegations. Anything over a limit of half a lakh of rupees (total value) goes to the Finance department.

President.—If the normal practice is to invite tenders then it may happen that some foreign manufacturer may find this wood suitable for his purposes and if he is entitled to take the wood merely on payment of the highest price, in that case though the match industry may be established in this country it will have no raw material.

Mr. Barrington.—All tenders are called on the strict understanding that we are not liable to accept the highest or the lowest tender.

President.—The Finance department in that case may ask why you accepted the lowest tender when there was a higher tender?

Mr. Barrington.—Yes.

President.—Do you have any sales at a flat rate in the forests without calling for any tenders?

Mr. Moodie.—No.

Mr. Barrington.—Any sale in a reserve is invariably either by tender or by auction. In some cases the rate is fixed and the thing is put up for selling of a sort of right of entry (premium).

President.—Has any concession been granted to foreigners in the forests.

Mr. Barrington.—All the teak is in the hands of Europeans.

President.—What I mean is, Japanese, Swedes and so on, that is to say anyone other than a British subject.

Mr. Atkinson.—The Kemendine Match Company were making a bid for a lease of the forests.

President.—Have they got a lease?

Mr. Atkinson.—They tendered for this one which Adamjees have got in the Paunglin Reserves.

President.—We have drawn the attention of the forest authorities to this point and have asked them that during the pendency of this enquiry no such rights should be accorded as far as possible because this is one of the points we are going to investigate. If the Government were to restrict the right of the alien capitalist would the forest authorities be able to trace the cases of *benami* transactions or anything like that where a German or a Swede or a Japanese gets the tender? For instance a big European firm may say "we will buy it and sell it to anybody we like." They may extract the wood and then they may sell to anyone, a foreigner or anyone else.

Mr. Mathias.—In the case of your plantation of match wood, when the trees have grown up there would be no difficulty in restricting the tenders to *bona fide* match manufacturers alone?

Mr. Barrington.—Assuming that there are many factories here.

President.—Supposing Government adopted that policy, there would be no difficulty in Burma—would there?—in restricting the supplies of match wood to *bona fide* match manufacturers?

Mr. Moodie.—Some other industries may also take these woods.

President.—So far as these particular species of wood are concerned has any other use been discovered?

Mr. Barrington.—They are suitable for making boxes, tea chests and things of that sort.

President.—The whole point is this. If the Government were to declare that policy, how far can that policy be made effective? Will the forest authorities be able to tell the Government "this lease has been taken by a British subject but really Y who is a foreigner is getting the wood."

Mr. Barrington.—The Commerce and Industry Department should be able to answer that question! The forest department have no means of getting the information.

Mr. Mathias.—I take it that if the system suggested by the President was adopted on a large scale the indigenous match manufacturers will raise something of an outcry if such a case occurred and bring it at once to the notice of the authorities. If that sort of thing came to the notice of the forest authorities, they would bring it to the notice of Government who would in their turn take steps to prevent it. For instance you can insert a clause in the contract by which the tenderer would not be entitled to sell the wood to foreign firms.

Mr. Barrington.—I don't know much about law, but are there not legal methods by which the Swedish Match Company may convert their match factory into a Burmese one and thus avoid that clause?

President.—Or they may float their own companies here. That is what they have done in the case of the Kemendine Match Company.

Mr. Mathias.—Whatever the subterfuges, if it was a fact that the match wood supplies in Burma were monopolised by foreigners and there was a suitable clause in the contract, it would be brought to the notice of the forest department and it would not be beyond the range of possibility for the contract to be cancelled.

Mr. Barrington.—Yes.

President.—Would it be necessary from the forest point of view to give licenses for a long period for a whole area? Could you not auction or call for tenders for a coupe which is ready?

Mr. Barrington.—The extraction agency has to keep a vast amount of labour, there is so much capital involved, so much skilled labour and so on that unless they can see their way at least 10 years ahead, it is not worth their while taking up the job. The same thing applies to match wood. After all if Adamjees knew that they could get only next year's outturn and that they would have to tender from year to year, they would probably have closed their factory.

President.—From the forest point of view would you recommend that these licenses should be taken out by the manufacturers themselves and that they should work them through contractors or any other agency they like, or would you call for tenders only amongst the manufacturers or would you put it up for a general tender for anybody to extract and sell to the manufacturer?

Mr. Barrington.—If the aim is to help the manufacturers they should have the first claim. As things go at present the tender is absolutely open to anyone who comes.

President.—There may be a combination amongst the manufacturers and in order to avoid it you may say "our rate is so much and there are more than one manufacturer who will tender, if not you have got to have it at a flat rate."

Mr. Barrington.—We can also put a flat rate and a premium. We can afford to wait but they cannot.

President.—If there are a few manufacturers there is no risk to Government revenue. You can refuse to sell, that is all.

Mr. Barrington.—Yes.

Extraction.

President.—This sort of extraction would be done more or less by smaller type of contractor. Take a plantation for instance it would not be very difficult to extract?

Mr. Barrington.—I should require a European to be placed in charge. It would be a fairly big show.

President.—So that ordinarily you think it might be advisable to call for tenders instead of giving a license to the manufacturer.

Mr. Barrington.—So far as the manufacturers are doing their own extraction, it is all right, but as regards extraction through a private agency I should think that would be the most satisfactory method of doing it.

President.—There are two ways in which you can do it, the first is to call for tenders from the manufacturers in which case they must pay at least a flat rate of the higher rate as the case may be, and secondly you can say "All right we will call for tenders from the general public and the manufacturers may tender if they like or the contractors may tender if they like." I think from the forest point of view it would be better to call for general tenders, would it not?

Mr. Mathias.—In point of fact as the match wood is not required for any other purpose it is unlikely that there would be any tender except from the match manufacturers.

Mr. Barrington.—I think the contractors will always try to get it because if a contractor can get a partial monopoly he can squeeze the manufacturer.

Dr. Matthai.—When you have got this match wood plantation on a large scale you may get a large number of contractors specializing in this.

Mr. Barrington.—Quite possibly.

President.—Have you got roads to the forests?

Mr. Barrington.—We have done something in Insein so far. We have made practically all the forest roads.

Mr. Mathias.—I take it in actual practice you would require a higher royalty where you have got roads; if you have got no roads they would pay less?

Mr. Barrington.—Yes. We make the main roads and the contractors make branch tracks from them.

President.—Cart roads I suppose?

Mr. Barrington.—Yes.

Foreign interest in factories.

President.—Mr. Moodie, in one of the statements I find it stated that in one of the factories the Japanese have some interest?

Mr. Moodie.—Yes.

President.—What sort of interest do you suggest they have?

Mr. Moodie.—Money interest. I can't remember where I got this information from.

President.—It is rather an important point. They can have money interest in many ways; they can lend money, machinery, raw materials and thousand and one ways. I put the question to a representative of one of the firms and he said nobody has got any interest in any way.

Dr. Matthai.—All that he said was that he got the machinery from Japan.

President.—Of course it would be to his interest to deny it!

Mr. Moodie.—There was some Japanese interest in the Kemendine factory sometime ago before it was burnt down.

President.—He said all the machinery is Japanese; most of the raw materials come from Japan; perhaps the proprietor lives in Japan; he has got Japanese experts to advise him and the process of manufacture and all that is Japanese. It is very difficult to say whether they have got any greater or more direct interest.

President.—As regards the Swedes have you got any information other than that they have got a factory here as well as a selling organisation?

Mr. Moodie.—They are all in the same office building.

Mr. Mathias.—The Swedish factories are not separate Companies.

Mr. Moodie.—They are three different Companies.

Mr. Mathias.—The Rangoon ones, under which Company do they come?

Mr. Moodie.—They have got only one factory.

Mr. Mathias.—They have got a selling agency and a factory here.

Mr. Moodie.—They had also a factory at Mandalay.

Mr. Mathias.—It was separate from the one that you have here.

Mr. Moodie.—Do you mean the Kemendine Match Factory?

President.—The Kemendine Match Company is the same organisation that has been taken over. We don't know whether they have floated another Company or whether they are running the same as part of the Lim Chin Song Factory.

Mr. Moodie.—They have got three different names in their office.

Mr. Mathias.—Is the Burma Match Company a rupee Company?

Mr. Moodie.—I don't know. I can find that information for you.

EXCISE DEPARTMENT, BURMA.

B.—ORAL.

Evidence of Mr. J. B. MARSHALL, C.I.E., I.C.S., Commissioner of Excise, recorded at Rangoon on Monday, the 28th March 1927.

Introductory.

President.—Mr. Marshall, you are the Excise Commissioner of Burma.

Mr. Marshall.—Yes.

President.—Is the Excise Department under the Government of India or is it purely a Provincial Department?

Mr. Marshall.—It is purely a Provincial Department. It collects the duty on salt for the Government of India which makes a contribution to the Provincial Government.

President.—Is salt the only excisable article which forms part of the Central Revenues?

Mr. Marshall.—That is the only one I am concerned with. There is a petrol excise duty, but I have nothing to do with it at all.

President.—I think that that is collected by the Government of India from the oil Companies direct.

Mr. Marshall.—I don't know. Nothing about it has ever come to me.

Mr. Mathias.—Do you perform any other function, for example Registrar of Joint Stock Companies?

Mr. Marshall.—No, I am only concerned with excise and salt. Formerly I was Inspector-General of Registration, but that has been taken over by the Financial Commissioner.

Dr. Matthai.—Do you mean you held that in addition to the duty that you now perform?

Mr. Marshall.—Yes.

Mr. Mathias.—Are you the Superintendent of Stamps?

Mr. Marshall.—No.

Mr. Mathias.—Who performs that function?

Mr. Marshall.—The Collector of Rangoon.

Mr. Mathias.—For the whole of Burma?

Mr. Marshall.—The Deputy Commissioner of each District is also the Collector of Stamps, but the Collector of Rangoon is the senior stamp authority.

Mr. Mathias.—Corresponding to the Superintendent.

Mr. Marshall.—I think so.

Salt Excise and Duty.

President.—Then salt I take is a Government monopoly. Is it manufactured under license?

Mr. Marshall.—It is manufactured under license but I would not call it a Government monopoly.

President.—It is a monopoly in that you have got to take a license and you have got to pay the excise duty.

Mr. Marshall.—Yes.

President.—There is also a Customs duty on salt. By whom is that collected?

Mr. Marshall.—By the Customs.

President.—Is there any conflict in the administration between the Customs and the excise as regards salt?

Mr. Marshall.—None at all.

Dr. Matthai.—You are not concerned with salt.

Mr. Marshall.—The excise duty on salt is collected by me and by my staff.

President.—Then as regards smuggling of salt, are you responsible or the Customs Authorities?

Mr. Marshall.—If it is smuggled from outside, the Collector of Customs is responsible. I am responsible if it is being illicitly manufactured.

President.—Whether by land or sea it is the Customs Authorities who are responsible for smuggling.

Mr. Marshall.—There is no smuggling by land. I suppose I should be responsible for smuggling by land, but there is not any.

President.—Because it is very heavy and there is very little to be gained by it.

Dr. Matthai.—Do the Government produce salt?

Mr. Marshall.—There is an experimental demonstration factory in Kyaukpyu District. That will only go on for two or three years. Afterwards it will be handed over to somebody.

Dr. Matthai.—Generally it is produced by private agency.

Mr. Marshall.—Yes. It is kept under double lock until the duty is paid. After that the licensee can sell it to anybody he likes. It is really manufactured in an outside place where the cauldrons are and it is put through a grating into bond.

Dr. Matthai.—It comes into your possession as a finished article and then you keep it under lock and key.

Mr. Marshall.—Under double lock. One key is held by the licensee and the other is held by the Salt Factory Officer, who is a Sub-Inspector.

Mr. Mathias.—What do you mean by double lock? Do you mean that it cannot be opened except by the Government's representative and the licensee at the same time.

Mr. Marshall.—Yes.

President.—In how many places salt is manufactured?

Mr. Marshall.—Most of it is in the Amherst District and there is quite a lot in the Kyaukpyu, Sandoway, Tavoy, Mergui, Hanthawaddy, Thaton, Akyab and Bassein Districts, altogether nine in all. In Upper Burma, we have got a system by which the licensee pays so much per cauldron or per pot. That is manufactured on a very small scale.

President.—The other one is on a fairly large scale.

Mr. Marshall.—Yes.

President.—How many bonded warehouses do you have in Burma?

Mr. Marshall.—There is one warehouse for each factory.

President.—I want to have a rough idea.

Mr. Marshall.—Without looking up the Salt Administration Report, I am sorry I cannot tell you off hand.

President.—Is the number too large. From the economic point of view does it pay the Government to have so many bonded warehouses for salt?

Mr. Marshall.—I think it would be more economical if small factories were all abolished and there were big factories producing three or four lakhs of viss per annum. There are some small factories producing only 10,000 viss which are not big enough to make the thing a success. One viss = 3·6 lbs., 100 viss = 4375 maunds.

President.—The point arises in connection with the match industry in this way. If the manufacture of matches was not a Government monopoly, then the question might arise in what way the excise duty should be levied. If we adopted the same system as you have in the case of salt, it might mean that

in different parts of the province you must have an inspector, office and so on for each small match factory.

Mr. Marshall.—Yes.

Dr. Matthai.—Roughly how many salt factories are there in Burma?

Mr. Marshall.—It is very difficult to say without the book.

President.—If you just fill in the figure when you correct the evidence, that would be enough.

Dr. Matthai.—You could not tell roughly what is the proportion of the collection charge to the total receipt.

Mr. Marshall.—I can tell you from the Salt Administration Report.

Mr. Mathias.—What staff is attached to the warehouse?

Mr. Marshall.—It depends on the area. In some areas where there are a lot of factories close together you will have one officer looking after 10 or 12 factories each with a warehouse and in other places where the factories are far apart, there may be two officers.

Mr. Mathias.—In some cases you will have factories where there is not enough work for one man.

Mr. Marshall.—Sometimes yes. He can do other work. He can do preventive excise work in his spare time.

Mr. Mathias.—You have to find work for him.

Mr. Marshall.—The work is there. If he wants work he can do it.

Application of an excise duty to the manufacture of matches.

President.—There are only four match factories in Burma and they are all situated in Rangoon.

Mr. Marshall.—Yes.

President.—Assuming that most of the factories were in Rangoon, would it mean very much additional work for the Excise department to protect the Government revenue?

Mr. Marshall.—If all the matches manufactured were to be kept under double lock and key and counted for the purpose of assessing the duty, it would mean a good deal.

President.—Ordinarily you would not have to count the matches, but you will have to count the boxes. If there are 2 million gross a year at the present production, ordinarily you could do it by measurement. You won't have to count it in the ordinary way. It may be possible to do it by simple measurement.

Dr. Matthai.—If you counted the tins and examined one or two tins casually, that would be all right.

Mr. Marshall.—It seems to me that it would not be very much work.

Mr. Mathias.—Supposing it was prescribed that the match companies should send you monthly returns of production, it would be necessary for your inspectors to pay occasional visits and check up these returns by measurement of the actual matches in stock. I suppose it would not be very much work.

Mr. Marshall.—No, it would be quite simple. You would take the manufacturers' accounts as correct subject to occasional check by some of my staff.

Mr. Mathias.—You can check it approximately at the end of the year from their account books.

Mr. Marshall.—Yes.

Mr. Mathias.—A very simple system of accounting could be prescribed showing the total amount of wood purchased and the number of boxes turned out.

Mr. Marshall.—There would not be any very great difficulty about that.

President.—Burmans do not keep any books. As regards salt, do you have to go into the account of manufacture or do you simply have so much quantity of salt put into the bonded warehouse, weigh it and charge the duty?

Mr. Marshall.—When I inspect the salt fields I enquire from the salt manufacturers how much they pay for fuel, how much they pay for labour and work out the cost of production simply with a view to checking whether there is any probability of salt being manufactured without duty.

Mr. Mathias.—That is checked from time to time.

Mr. Marshall.—Yes.

President.—Manufacture is not carried out under bond. You have not got what are called bonded factories such as in the United States where everything is manufactured. In the United States nothing can be done except in the presence of Customs or Excise Authorities.

Mr. Marshall.—In this case in Burma salt is actually boiled outside. Anybody can get into the boiling room. It is only the store room that is locked. Of course it is a breach of the condition of license if they don't put all the salt manufactured into the room straight away.

President.—Have you any reason to suppose that any salt that is actually manufactured is not put into the bonded warehouses?

Mr. Marshall.—From the figures they give me of their cost of manufacture and from what I know of the price at which they sell salt, it seems to me probable that a lot of salt escapes paying duty.

President.—Therefore it would be advisable for Government to keep some supervision during manufacture. The same thing might happen in the case of matches.

Mr. Marshall.—Yes, except that in the case of matches we will be dealing with big capitalists.

President.—Some of them are not very big. As regards the biggest of them I have no doubt that very little supervision might suffice, but as regards the smaller ones, matches are not entirely manufactured in the factory. They carry out some of the processes there and the materials are handed out to outside labour. In such a case it would be very difficult to check unless you are actually present in the factory and keep an account of the quantity of splints, veneers and labels handed out to outsiders which go to the making of finished matches. As regards the smaller factories, I am not so sure that supervision on a considerable scale might not be required if the Government were to collect excise revenue in the same way as salt.

Mr. Marshall.—You will have a responsible excise Officer in each factory.

Dr. Matthai.—When you issue a license you charge a fee.

Mr. Marshall.—No, not for salt licenses.

The stamped label system.

President.—One alternative that struck me is to insist that every box should be labelled and stamped just as they have in Europe for chemicals and in some places for matches and other excisable articles. That is to say if a man who wants to manufacture matches buys as many stamps as he wants and puts them on the boxes and the law forbids the sale of any matches which do not bear this label, do you see any great difficulty in such a system?

Mr. Marshall.—I have no experience of such a system. Does anything prevent the boxes being used over again?

President.—It is pasted over the ends.

Mr. Marshall.—As is done with soda water bottles at home or on patent medicine.

President.—You will find them in drugs and patent medicines. I have seen them on matches in some parts of the Continent.

Mr. Marshall.—You charge the manufacturer with the cost of printing *plus* the duty.

President.—That would be the duty that he has got to pay.

Mr. Marshall.—Would not the cost of printing be a considerable proportion to the revenue.

President.—Considering now the quarter anna stamp which is printed, a little more paper will probably be wasted, but I don't think the cost would amount to very much. It is a very narrow strip of paper bearing the Government stamp and it will show the amount of duty paid.

Mr. Marshall.—We have no system at all like that at present in Burma.

President.—I don't think we have in India either.

Mr. Marshall.—I don't think there will be any difficulty.

Dr. Matthai.—You don't think that there will be any abuse of the system.

Mr. Marshall.—No.

Mr. Mathias.—Do you foresee any difficulty as regards inspection to see whether such boxes are properly stamped at the shops where they are sold?

Mr. Marshall.—You would have to make it a criminal offence to sell boxes without stamps. In that case, police and preventive officers would inspect and prosecute.

Mr. Mathias.—Take Rangoon for instance.

Mr. Marshall.—We can check all the shops easily.

President.—So long as it is made a cognisable offence, there should not be much difficulty.

Mr. Marshall.—No.

Mr. Mathias.—You must remember that matches are sold by small people to whom even a little profit would mean a great deal. If the shopkeeper could devise some method by which he could remove the stamps, he would do it.

Mr. Marshall.—He would have to act in collusion with a manufacturer.

Mr. Mathias.—The shopkeepers might act in collusion with small manufacturers.

Mr. Marshall.—They would have to act in collusion with some manufacturer to get unstamped boxes on which they could use the old stamps.

President.—You could perforate it in such a way that it would be difficult for anybody to remove the stamp.

Mr. Mathias.—I will put it this way. It would be a matter which would require careful investigation. After considering the cost of stamp, the possibility of fraud and so on and the outturn of very small match factories it would be a matter for consideration whether the balance of advantage would be in favour of making the excise duty, if it is levied, applicable to all factories turning out more than a certain amount. Would you agree that it would be a matter for consideration or would you be able to say that there would be no difficulty at all?

Mr. Marshall.—I could not say off hand that there would be no difficulty.

President.—In a case like this, it will be necessary for us to examine some expert manufacturer of labels who may be able to tell us that the labels once used can be easily detected if they are used again.

Dr. Matthai.—Supposing we had two alternative methods—one as suggested by the President by means of stamps and the other by simply asking each producer to send in periodical statements about the output which you check which of the two methods is likely to prove less unsatisfactory?

Mr. Marshall.—I have no experience of a stamp system of collecting revenue at all. I think that it would be more satisfactory to have all matches manufactured put under double lock and checked by an excise officer.

President.—In the case of the match industry where veneers can be manufactured in one place and the box making in another, the owners of big factories, in order to evade the duty, would distribute the splints and veneers to outside people. You would have no control then even on big factories.

Mr. Marshall.—You might prevent that by having all matches manufactured in big factories.

President.—That is one of the points we have to investigate. We have to consider on what scale the industry is carried on. If the percentage of manu-

facture, on the cottage model, is high compared with the manufacture on a large scale, then obviously we must devise a system by which the law could not be evaded by the smaller factories. Even to-day I think in India, for instance, there are only two very big factories. The rest are not cottage industries but small factories.

Dr. Matthai.—You have no idea how they levy excise in the United Kingdom.

Mr. Marshall.—No.

President.—Supposing the label is put on matches manufactured in India, you will have to have labels on imported matches. Obviously you must compel the foreign manufacturer also to buy Indian labels.

Mr. Marshall.—They have got to show whether they are made in Burma, in Sweden or in Japan.

President.—They have to.

Mr. Marshall.—A false declaration on labels should be punishable.

President.—It would be like this. They may manufacture the labels in this country and say 'this is made in Sweden' simply to evade the excise duty, and then it is put on the market.

Mr. Marshall.—That would be a criminal offence.

President.—It would be undoubtedly. The foreign manufacturer may buy the labels and put them on when he is manufacturing matches in his own country. I should not think that there would be much difficulty about that. For instance, Sweden can buy as many labels as she wants for export to India.

Mr. Marshall.—It could be done here also.

President.—It would be cheaper for them to do it in their own country. Then, the Customs authorities could simply count these and pass them. Unless the law forbids the sale of matches without labels which would be equally applicable to both domestic and foreign matches, there would be a lot of difficulties.

Mr. Marshall.—I agree.

Local excise.

President.—As regards the local excisable articles I think that alcohol is the principal one.

Mr. Marshall.—Yes.

President.—What is the system there?—Is it what they call a farming system?

Mr. Marshall.—Different systems apply. In the case of country spirit, it is manufactured in a distillery by a contractor. He is given a certain area. He sends out the spirit to the warehouse in that area where it is kept in bond and issued from there to the shops on payment of duty *plus* the distiller's price.

President.—Are retail prices fixed by law or by the retailer?

Mr. Marshall.—There are two districts in which maximum prices are fixed. In the other districts the retailer can sell at any price he likes. I don't think that the maximum price has been a very great success.

Mr. Mathias.—If an excise duty were levied on matches, of course it would go to the Central Revenues.

Mr. Marshall.—I was just wondering about that.

Mr. Mathias.—As a rule where countervailing excise is imposed, in order to recoup loss of Customs revenue, on goods manufactured in this country on which when imported there is a Customs duty, the excise as a rule would go to the Central Revenues.

Mr. Marshall.—Yes, if it is to replace Customs revenue which is being lost.

Mr. Mathias.—According to the terms of reference, we have to investigate the question of an excise duty to compensate for the loss of revenue

owing to the decrease in the import of matches. It would normally follow that the receipt of excise on that would go to the Central Revenues.

Mr. Marshall.—Except that it is open to the objection that an excise receipt should generally be a provincial one.

Mr. Mathias.—The cotton excise was central and following on that analogy the excise on matches would be central.

Mr. Marshall.—Yes, on that analogy.

Mr. Mathias.—Assuming that it is Central the provincial Government would have to undertake the collection of that. In that case, would the provincial Government do so free of cost?

Mr. Marshall.—They would expect payment of the cost of collection as is done in the case of salt.

Mr. Mathias.—The point I am getting at is this. We shall have to investigate the question as to whether it is necessary for Government to place an excise to compensate the loss of Customs. In that connection we should want to know what the nett result of placing the excise duty would be. Can you give us an idea as to what would be the cost of collection by the provincial Government?

Mr. Marshall.—It would have to be worked out after it has been started. You cannot tell how many extra men will be required. If you are to have an excise inspector for each factory, his pay on an average will be Rs. 225 a month. He will have to be given a peon on Rs. 20. Thus, the total cost will be Rs. 245 p.m., for each factory.

Mr. Mathias.—I take it that the cost of collection as against receipts would not be considerable.

Mr. Marshall.—I have no idea of what the receipts would be.

President.—An officer of the grade of inspector would be good enough for a job like that.

Mr. Marshall.—I think so. We have only got sub-inspectors in charge of salt factories on a pay of Rs. 50 to Rs. 100.

President.—But salt is a pretty bulky article. One gross of matches costs Re. 1-8-0.

Mr. Marshall.—It is better for the Central Government which is going to get the revenue to have a trained staff.

President.—The idea at present is that as far as possible, the sources of Central revenue should be looked after by the Central Government as they are doing in the case of the income-tax.

Mr. Marshall.—Yes.

Mr. Mathias.—There are many exceptions to that.

Mr. Marshall.—Salt is an exception.

Mr. Mathias.—The cotton excise was collected by the provincial Government?

Mr. Marshall.—It was not collected by the Excise Department.

Dr. Matthai.—The excise on salt is collected by the Central Government in Madras. They have got a Salt Commissioner.

Mr. Marshall.—I think so.

President.—That would be an obvious course for the Central Government to adopt if it is a biggish matter.

Mr. Marshall.—I think so too.

Mr. Mathias.—Do you mean that the whole of the staff could be put under the Collector of Customs or the Commissioner of Income-tax.

Mr. Marshall.—Yes.

President.—The Commissioner of Income-tax is more suitable because he has officers all over the province.

Mr. Marshall.—Yes.

Mr. Mathias.—You have no Director of Industries,

Mr. Marshall.—No.

President.—I find in some countries—I think in the Federated Malay States—they have got a double system of excise on matches. Where they use imported materials they have to pay at a higher rate. But it does seem to me that it would be simple to increase the duty on the imported materials. For instance if you increase the duty on logs, the situation might be met better. All manufacturers may have to import chemicals and things like that. Supposing we came to the conclusion that as far as possible indigenous wood ought to have preference from the excise point of view, would you be in favour of rather increasing the duty on the principal raw material or would you suggest that all matches manufactured out of imported articles should have a different excise. From the administrative point of view I think it would be simpler to increase the duty on the imported materials.

Mr. Marshall.—Yes.

President.—Otherwise you will have to keep more supervision during manufacture.

Mr. Marshall.—Yes.

Dr. Matthai.—Coming back to the question of intoxicating liquor, I believe there are two elements in that. You have a sort of fixed duty which you levy on issue from the warehouse.

Mr. Marshall.—Yes.

Dr. Matthai.—And there is also a variable duty on sales.

Mr. Marshall.—No. We simply put it up to auction.

Dr. Matthai.—The duty on sales varies.

Mr. Marshall.—The license fee varies.

Dr. Matthai.—Would you suggest such a distinction here, one purely levied on production and one purely levied on sales of matches?

Mr. Marshall.—It would mean that everybody who wants to sell matches would have to get a license. You will have to extend the system to every single village in the province. Is it to be a license fee for every retailer?

Dr. Matthai.—A license fee for every manufacturer.

Mr. Marshall.—A fixed fee based on the quantity manufactured?

Dr. Matthai.—That is a matter of detail.

Mr. Marshall.—If it is a duty on the quantity manufactured, it would be simpler to levy.

Dr. Matthai.—It may be necessary for us to get a certain amount of control over the production of matches. In that case, the system of license might give just that handle by which we can exercise control.

Mr. Marshall.—It would be a good thing to have a license. If it was found that the duty was being evaded, Government could refuse the license.

President.—In this liquor business the license fee is a premium.

Mr. Marshall.—They bid against each other.

President.—That is apart from production. It is really a salami that Government gets.

Mr. Marshall.—It is partly the price of the monopoly value of the right to sell that form of liquor in a certain area.

President.—It is really like a premium.

Mr. Marshall.—It is the monopoly value of the right to sell the liquor.

Mr. Mathias.—The system assumes that the liquor shopkeepers are a better judge of the quantity of liquor that can be sold in a certain area than Government and that therefore the value of the right to sell liquor in a certain area is best determined by putting it up to auction?

Mr. Marshall.—Yes. The best way of getting the actual value at the present duty rates is by putting it up to auction.

Mr. Mathias.—The capacity of the local consumer is better judged by the retailer than by the Government.

Mr. Marshall.—I would not put it that way. I would say that they can only judge of what they can pay at present duty rates.

Mr. Mathias.—That is to say they are really the best judges of what they can sell at a certain price so that it is really a convenient form of estimating the taxable capacity of a particular commodity.

Dr. Matthai.—If you take toddy revenue it is a tax purely in the shape of a duty on sales.

Mr. Marshall.—Only the license fee is realized by auction.

President.—And the trees may be tapped by any one?

Mr. Marshall.—The owner of the trees taps them and he gets a transport pass to carry it to the licensee. He is not allowed to sell it himself.

President.—About these licenses, I think in Bombay at one time there were two things which were sold by auction, the first was the right to manufacture liquor—of course he paid the duty on production. Then there was another system by which the right to manufacture was not auctioned at all. They called for tenders and they asked how much they would charge Government for manufacturing per gallon. Then of course Government sold it to outsiders adding duty and subsequently the right to sell the liquor in shops was auctioned. Is the latter system in force in Burma whereby Government arranges to manufacture the liquor?

Mr. Marshall.—The distiller manufactures it and he says at what price he will supply it.

President.—On that Government does not get any premium?

Mr. Marshall.—It only gets the duty. The distiller's price does not concern Government but of course the lower the distiller's price the bigger the profit for the retailer and we get more in license fees.

President.—Could this system be applied at all to the match industry? This presumes of course that Government has a monopoly of manufacture, so that unless Government had a monopoly of manufacture it could not keep the manufacture of matches within limit. The idea is that you must first of all restrict manufacture.

Mr. Marshall.—I don't see how it can be applied to matches.

President.—It presupposes such a system that somebody has got a monopoly or the right to restrict the manufacture as they are doing in France to-day. Government there has got a monopoly and it manufactures matches. In respect of that article they are giving the right to manufacture to a company, and the company would sell to retailers at a price fixed by Government. Now, here in this country the industry has gone on for a number of years and there are a number of factories in the country and it would present very serious difficulties if Government were to say "you have got to close down" and people have to buy matches from factories licensed by Government or from factories under control. There are now 50 to 100 factories in India to-day: could Government introduce the system that you have got?

Mr. Marshall.—I don't think we can.

Mr. Mathias.—Any system of that kind to be applied to matches would mean the acquisition of these factories?

Mr. Marshall.—Yes, we would have to pay compensation of some kind.

Dr. Matthai.—The real difference between liquor and matches is that while the object of the former system is to restrict consumption, in the case of matches there is no need for restriction, that is the vital difference, is it not?

Mr. Marshall.—Yes.

President.—Under the distillery system does Government provide the distillery?

Mr. Marshall.—No; that is private capital.

President.—I think in other provinces Government has to provide the distillery building and appliances, or Government has got to take it over on a valuation on the expiry of the license. In the olden days what they did was

to make some sort of valuation, allowing so much for depreciation, etc., and the man had to take it over at that price whether he liked it or not.

Mr. Marshall.—As far as I know Government has no liability in connection with these distilleries at all.

President.—I wonder whether you can get a man at all in that case?

Mr. Marshall.—These two distillers—Leong Chye and Dyer, Meakin & Co. have been in the business for years.

President.—These two men got a monopoly practically owing to these factories being of some importance?

Mr. Marshall.—There was a third distillery at Toungoo but it is not being used now.

President.—If the Government were to introduce a monopoly system either it would have to provide the factory to the manufacturer or enter into a long term contract with him and compensate him on termination of the contract.

Mr. Marshall.—That has not been necessary in Burma so far as distilleries are concerned, but it seems to be fair.

President.—Or Government may give a long term contract to the manufacturer for a number of years, say, 20 years, and say “you are getting a monopoly to manufacture and we shall take so much out of the profits.” That would be one of the methods of working a monopoly.

Mr. Marshall.—Yes.

President.—What I want to know is, from the excise point of view can a monopoly be worked by giving indiscriminate licenses to anybody who came forward to manufacture?

Mr. Marshall.—I think that would be difficult.

President.—That would mean of course that every factory will have to have somebody familiar with the process of manufacture on behalf of Government to see what they were doing, how much they were producing and so on.

Mr. Marshall.—That is so.

President.—So that the two alternatives that are really left now are those that we were discussing, firstly labels and secondly bonded warehouses.

Mr. Marshall.—Yes.

President.—Can you give us a list of salt factories?

Mr. Marshall.—269.

President.—What is the average output of a factory?

Mr. Marshall.—The average output is roughly a little over 2,000 maunds a year. The duty is Re. 1-4-0 a maund that is about Rs. 3,000 duty per factory.

President.—How many inspectors have you got?

Mr. Marshall.—On purely salt work we have got 6 inspectors, 38 sub-inspectors and 55 peons.

President.—How do they inspect these factories?

Mr. Marshall.—36 Sub-Inspectors to 269 factories, that is 7 to 8 factories to an inspector. Sometimes there are as many as 13 or 14 under one Sub-Inspector.

President.—Can the factories be inspected in a day?

Mr. Marshall.—Yes, because in the salt producing area they are all quite close together.

President.—What is the total cost of your inspection department?

Mr. Marshall.—Taking those concerned only with salt, not doing any excise work, the cost is Rs. 1,01,207.

President.—What is the revenue?

Mr. Marshall.—A little over Rs. 6,50,000.

President.—That only includes the inspection staff?

Mr. Marshall.—Yes, it does not include the work done by myself, or by the deputy commissioners or the superintendents of excise.

President.—So that it is a pretty big percentage?

Mr. Marshall.—You have got to remember that customs revenue is also protected by us by prevention of illicit manufacture of salt, and the Customs revenue comes to over Rs. 27,50,000. Prevention of illicit manufacture is all done by the excise department. The amount the Government of India pay is roughly Rs. 2 lakhs, I think. This Rs. 1,01,207 I speak of for the salt establishment is met from provincial funds.

President.—What do you get from the Central Government?

Mr. Marshall.—About Rs. 2 lakhs.

President.—Part of that would be excise and part customs really?

Mr. Marshall.—Yes. They pay 8 per cent. of the provincial expenditure on excise. Customs are actually paid by the Government of India.

Mr. Mathias.—That 8 per cent. includes the work done for the Central Government by all officers, such as deputy commissioners and everyone else?

Mr. Marshall.—Yes, and also includes officers of the salt department. The Government of India are really paying about another lakh, for the work done by officers who are not whole-time salt officers.

President.—And the rest is charged to liquor?

Mr. Marshall.—Liquor and opium. Our revenue from opium is provincial. We buy the opium from the Government of India at approximately the cost price, but the profit we make on it goes to the provincial revenues.

Dr. Matthai.—You gave us the average size of a salt factory. What is the biggest size?

Mr. Marshall.—I am sorry I have not got it with me but I can send the Chief Superintendent of Salt down who will give you all the details about manufacture of salt.

Dr. Matthai.—I just wanted to have a general idea of the proportion of small salt factories which it would be uneconomical to work from the revenue point of view.

Mr. Marshall.—I think it would be about 40,000 viss.

President.—Would it be very troublesome for you to give us a sort of provincial statement as to what it would cost the Government to levy an excise on matches on the assumption that it is levied under the bond system?

Mr. Marshall.—It would be largely a matter of guesswork I am afraid. I do not know what amount of work would be involved in counting the matches, and supervising storage and issues and so on.

President.—There is no hurry about it. You might go to one of these factories and get an idea when you find time. Burma is a very important province in this enquiry and we should like to get some idea. As regards labels we shall have to work it out ourselves because we have not yet thought it out, but as regards the other system of assessing the duty on issues from the bonded warehouse the point would be to ascertain how far supervision during the process of manufacture may be necessary in order to check production. You may take three or four months over it and in the meantime kindly visit one or two factories and then give us an idea of the cost to Government.

Mr. Mathias.—At the same time could you give us some general idea of what be the cost if a system like the cotton excise system were adopted.

Mr. Marshall.—Yes.

President.—When you inspect a factory you would get, I think, an idea of the sort of supervision it would require, because without that it would be very difficult for you to calculate the cost. It need not be very accurate, we want only an approximate idea. One of the ways in which you can check the production is from the quantity of logs used. It is a very fair indication.

Mr. Marshall.—Yes, in the same way as we check the production of salt by estimating the amount of fuel consumed.

President.—It will be a fairly accurate check because the outturn is pretty well known. So when you have time if you will kindly go into the question and let us have a statement it will be very useful.

Mr. Marshall.—Yes.

President.—If you think of any better method of collecting excise revenue, we should be grateful. It is a new thing for us. Give us your views generally.

Mr. Marshall.—Yes.

COLLECTOR OF CUSTOMS, RANGOON.

Evidence of Mr. A. E. BOYD, Collector of Customs, recorded at
Rangoon on Wednesday, the 30th March, 1927.

Introductory.

President.—Mr. Boyd, you are the Collector of Customs, Burma.

Mr. Boyd.—Yes.

President.—I suppose you have been to all the principal ports.

Mr. Boyd.—Yes.

President.—The Customs Department is entirely a Central Department, is it not?

Mr. Boyd.—Yes.

President.—You are directly under the control of the Government of India.

Mr. Boyd.—Under the Central Board of Revenue.

President.—You have been sending returns to the Government of India as regards the import of match wood for veneers and splints.

Mr. Boyd.—Yes.

President.—I suppose it would not be possible for you to do so with reference to the other raw materials, e.g., chemicals because they will be used for other purposes.

Mr. Boyd.—We could not do that. They would not be bought entirely for match-making purposes.

President.—I suppose as regards that we can get information from the manufacturers of matches themselves.

Mr. Boyd.—Yes.

Method of levying the import duty on matches.

President.—There is at present a specific duty of Rs. 1-8-0 on matches. Now we have to consider whether having regard to the fact that the Government revenues have been dropping owing to the manufacture of matches in the country itself, it may not be necessary to levy some sort of excise.

President.—At present when you are levying the specific duty, do you take their declaration as to quantities, the origin of the country, etc.?

Mr. Boyd.—Supposing a consignment comes in, we examine a certain amount, break open some of the packages and count the actual number of boxes in a case and we charge duty on an average.

President.—Do you count the number of boxes?

Mr. Boyd.—We count the number of packets. We know how many packets go to a case.

President.—You actually count.

Mr. Boyd.—Yes, we count about 2 per cent.

Dr. Matthai.—How many boxes go to a packet?

Mr. Boyd.—10 boxes per packet. They are again made up in bigger tins 120 packets to a tin and 6 tins to a case.

Dr. Matthai.—And the tin containing how many packets?

Mr. Boyd.—There are 50 gross of boxes to a case. Each case contains six tins. Thus it will come to 8½ gross to a tin.

President.—In some places they have got packets of 12. Here I think the packet contains 10 boxes.

Mr. Boyd.—Yes, that is so far as Burma is concerned.

President.—I suppose there is a declaration as to the country of origin.

Mr. Boyd.—Yes, the invoice shows that.

Levying an Excise duty.

President.—As regards the excise, there are several methods of levying the excise. There are three well known methods, first you can have the whole manufacture carried out in bond (that is obviously difficult in a country like India), second you can have a sort of bonded warehouse simply for the manufactured article in the factory itself. There is a third method which is prevalent in some parts, that is fixing of labels on every box.

Mr. Boyd.—That is not altogether safe. Your first method is, I think, in vogue in a cigar factory in Dindigul.

President.—You have got an officer in charge of that factory.

Mr. Boyd.—The manufacturing part of the factory is a bond. The other part where stores are kept is not. As tobacco is brought in, so much has to be passed into the bonded part out of which so many cheroots are made and weighed.

President.—There is an excise on the cheroot, but not on tobacco.

Mr. Boyd.—That is so.

President.—That is where you don't have to keep tobacco in a bonded warehouse.

Mr. Boyd.—Quite.

President.—That is all right where you have got a big factory, but where you have these tiny little things—where they manufacture part of the thing by machinery and hand that over to the outside people to finish the process—it would not be very easy.

Mr. Boyd.—I am not quite sure how that is done.

President.—There are two small factories. What they do is simply they make the veneers and the splints and they do the dipping which is done partly by machinery and partly by manual labour and they distribute the splints and the veneers to outside labourers to make the boxes, put on the labels, fill the boxes and bring them back to the factory. It will be very hard in this case. Even if you have a bonded warehouse you would not be able to apply that to such a factory. Of course there are bonded warehouses for salt.

President.—Therefore as far as I can see at present another alternative method would be the label business. I cannot think of any other method. Can you suggest any other method?

Mr. Boyd.—The label method can be evaded by any one wishing to cheat.

President.—Do you know what I mean, a band like the one you have on patent medicines. I have seen them on Continental matches and I believe in the Federated Malay States they have two different labels, one for matches manufactured out of indigenous materials and the other for matches made out of foreign materials.

Mr. Boyd.—I see difficulties in that method. If you paste 100 labels for 100 boxes, one or two labels may be damaged.

President.—Every manufacturer of matches will buy a stamp like postal stamps and the law will prohibit the sale of any matches which don't have this band intact round the match box. If they are damaged, Government will make arrangements to replace them.

Mr. Boyd.—We did it in Madras for sometimes when there was a lot of smuggling in matches. Every single packet was stamped. Any matches found in the bazar unstamped, were confiscated.

Dr. Matthai.—You tried this as a temporary measure.

Mr. Boyd.—Yes.

Mr. Mathias.—How did it work?

Mr. Boyd.—It worked well.

President.—In the label it would be easier still. You don't have to do anything yourself except to look at the matches.

Mr. Mathias.—How was your stamping done?

Mr. Boyd.—With a rubber stamp.

Mr. Mathias.—If it is to be a permanent measure, it is fairly easy to evade.

Mr. Boyd.—No.

Mr. Mathias.—The rubber stamp may be imitated.

Mr. Boyd.—No.

Mr. Mathias.—Supposing the stamping arrangements last for a couple of years, any one who wants to evade will only have to purchase matches with stamps on them and imitate. It may be very satisfactory as a temporary arrangement, but it can never remain as a permanent measure.

Mr. Boyd.—You can get over that. If anyone wants to do that, as far as the labels are concerned, we can simply take the labels and perforate them.

President.—Some means could be devised by which the labels could never be used again.

Mr. Boyd.—Yes, very easily. If necessary we can change the perforation. Only the man responsible will know it.

Dr. Matthai.—Would you have to have a special staff?

Mr. Boyd.—Yes.

President.—If we had this one for the excise, we can go to the Customs, otherwise the imported matches may be smuggled and they escape both the Customs and excise. If you have a system of labels, it will be quite easy to apply for both. The foreign manufacturer will only have to buy the labels.

Mr. Boyd.—It will mean a tremendous amount of work. Thousands of cases come in. They will have to be broken open and repacked. Who is going to pay for it?

President.—The labels will have to be fixed in the country of origin.

Mr. Boyd.—Do you mean where they are manufactured?

President.—Yes. They will have to buy from the Indian revenue authorities the necessary quantity of labels just as they will buy from the post office ordinary postage stamps. There may be forgery. In that case there may be forgery in the case of stamps too.

Dr. Matthai.—When you had this temporary system, did you have a special staff?

Mr. Boyd.—No, it only lasted for a short time.

Dr. Matthai.—How long did it last?

Mr. Boyd.—For a few months only.

President.—Do you know who manufactures these stamps in India?

Mr. Boyd.—I think that they are printed in Nasik.

President.—The label may be worth a pie or two pies. We have to minimise the cost of manufacturing labels as much as possible. If they can manufacture three pies stamps, there is no reason why the labels should cost more, because they will be thinner. If you had a band

Mr. Boyd.—Why not the stamp?

President.—The idea is that a stamp may be used again, as regards the label, if you tear the end, it is finished. The band will have to go right round

Mr. Boyd.—The manufacturers are not likely to do it.

President.—It is done in some countries. They have to do it.

Mr. Boyd.—Of course it can be done on the machine. If you make it a law of the country, they have to do it.

President.—Supposing we use these labels for excise and we did not have something on the same lines in the Customs, would there be any difficulty? Or do you suggest that the same sort of thing should be done as regards foreign matches?

Mr. Boyd.—So far as foreign matches are concerned, they are bound to come through us.

President.—As regards the inspection of a *panwalla's* or *bidiwalla's* shop, might not there be some difficulty? They may use these and put Indian matches in them and sell them as foreign matches entirely. It is possible that they may collect these boxes.

Mr. Boyd.—There will be two different sets of matches on the market, one with the labels and the other without.

President.—There is no reason why foreign matches should be exempted from the use of the labels?

Mr. Boyd.—I am not sure if you can make them pay the excise duty. I think you had better leave the foreign matches alone. Don't bother about them.

President.—The conditions of manufacture are such that we could not really levy the excise at the source.

Mr. Boyd.—Then, you put it the other way "if you want us to help your industry, you have got to help us by altering your method of manufacture and thus making it convenient for us to check."

President.—These small factories have sprung up all over the country. Unless Government decide to close them down on some understanding with these factories, it would, I think, be very difficult.

Mr. Boyd.—How many of these factories are there?

President.—There are only four in Burma but there are nearly 150 in India in all.

Mr. Boyd.—As far as Burma is concerned, we should probably be able to do it.

President.—But there is nothing to prevent other factories from springing up.

Mr. Mathias.—Have you had any experience of the cotton excise?

Mr. Boyd.—No.

Mr. Mathias.—Are there any cotton factories here?

Mr. Boyd.—No.

Mr. Mathias.—In Bombay do you know who supervised the collection of the cotton excise?

Mr. Boyd.—The Commissioner of Excise, Bombay.

President.—In a cotton factory all the processes would be ordinarily finished in the factory itself.

Mr. Boyd.—That is so.

President.—When these things (veneers, etc.) are passed out, what can you do?

Mr. Boyd.—I am afraid that if Government want to help factories, they must conform to certain regulations.

President.—If the country decides to have cottage industries to give employment to outside labour, they will say "we do not want to discontinue that, if there is some other method by which the industry can be allowed to continue on its present lines and the revenue protected".

Mr. Boyd.—Then, you can introduce the band.

President.—The band system may have another advantage if it is applied to the Customs. You may be able to tackle the question of smuggling from non-Indian States and other places if you insist on the band being put on.

Mr. Boyd.—We know that here as far as Customs is concerned, if it is from India, we don't bother but if any foreign goods come we do.

President.—Even if it escapes through the Customs barrier, if the law provides that no matches shall be sold in the country without the band, it may be very difficult to bring them in.

Mr. Boyd.—You can do it all right as far as foreign ones are concerned.

President.—They have to purchase their stamps from India.

Mr. Boyd.—Yes.

President.—Then, they will have to get them exported to India.

Mr. Boyd.—They are not going to pay the excise duty. They are going to pay only the import duty. They will have to get the same sort of labels. They would supply their own labels. They would not buy them from India.

President.—They will label them in this way. You would not admit them into India, if they have not paid the duty. If they smuggle them in having purchased the labels in India they will bear the label whether they pay the duty or not.

Mr. Boyd.—They would not pay the duty on the label. The label would not bear the duty. But we would charge the duty.

Mr. Mathias.—When they come through Kathiawar they still have labels on. They don't pay the same duty. They are smuggled in bearing the labels.

Mr. Boyd.—That is up against the land frontier between Kathiawar and Bombay.

Mr. Mathias.—The label won't help you to differentiate between smuggled and non-smuggled.

Mr. Boyd.—Not as far as smuggling is concerned.

President.—If you compel them to buy the stamps from revenue authorities, they must bear the labels.

Mr. Boyd.—You must put the duty accordingly.

President.—In the duty the cost of label is included. Supposing 100 labels are going to cost one anna, then the duty will be Rs. 1-9-0 (Rs. 1-8-0 which is the present duty plus one anna the cost of labels). Each label will bear 100th part of that figure.

Mr. Boyd.—It will be a job. There will be somebody out here who will have many millions of these labels to keep the factories well supplied with them.

Mr. Mathias.—They will have to put these labels on some of the boxes and not on others.

Mr. Boyd.—They would have to manufacture certain cases for India alone.

President.—It is like this. There will be a continuous band round the box. The label will have to be printed in that form. If you simply add a little to the cost, if they wish to sell their matches in this country, under the law they will have to accept that condition. Supposing we are not able to devise any other method of protecting either the Customs or the excise there is no other alternative.

Mr. Boyd.—What you want to get at is that all matches made in this country pay the excise duty.

President.—Yes and also all matches coming into the country must pay the excise duty.

Mr. Boyd.—That is arranged here. All matches coming into the country pay the duty.

President.—That is true. But there is increasing evidence that there is evasion of the Customs duty in some parts of India.

Mr. Boyd.—Over the land frontier and not in the main ports.

President.—In Kathiawar there are ports.

Mr. Boyd.—That is the difficulty.

President.—It may be the land frontier or it may be the sea frontier. There may be smuggling through small ports or landing places.

Mr. Boyd.—I should like to think it over and let you know.

President.—Your opinion will be particularly valuable. You have been in Bombay where these difficulties have arisen and are every day getting bigger and bigger. There are three points: as regards customs, how to protect the Customs; then, there is the excise and then there is the question of how to prevent the evasion of the excise or the Customs.

Mr. Boyd.—Yes.

President.—In the case of labels, you will consider whether the labels might be used more than once.

The prevention of smuggling.

When you gave evidence before the Taxation Enquiry Committee, you made some remarks about smuggling. I should like to know your experience as regards that in India as well as here.

Mr. Boyd.—In what way?

President.—They say "The most difficult of the problems of prevention is, however, that of protecting the land frontiers, and it is here that smuggling, particularly of matches, cigarettes, saccharine and gold thread, has been most marked."

President.—Is it your experience that smuggling on a large scale is being carried on.

Mr. Boyd.—It certainly was when I was in Bombay, and in Madras they had smuggling on the Pondicherry frontier and Karikal. These were very open. Pondicherry is roughly 100 and Karikal 40 to 50 miles and there was smuggling of matches and gold thread specially.

Mr. Mathias.—Could you give us an idea of the actual quantity of matches smuggled?

Mr. Boyd.—Not of matches only, but we calculated that Government was losing about 7 to 8 lakhs of rupees a year by smuggling.

Mr. Mathias.—You could not calculate the amount on matches only?

Mr. Boyd.—We could have. I took Mr. Campbell to these parts and every place we went was full of matches.

Dr. Matthai.—How long ago was that?

Mr. Boyd.—It was in October 1923. The Government of India asked me to go over these places and put forward suggestions how to guard the frontiers.

President.—I think in a case like that I think the label business might help you more than stamps? It does not matter where they come from.

Mr. Boyd.—They may come from the French territory.

President.—How can they be sold in India even if they came from the French territory if there is any label? The man who is in possession of foreign matches without labels is liable to prosecution.

Mr. Boyd.—Supposing a firm sends out a certain consignment of matches to Pondicherry. The French territory is not guided by our regulations at all. Then they are landed at Pondicherry and come to British India by crossing the frontier.

President.—If you come across matches which do not contain labels, you will ask the man how he got them. If his matches does not bear a particular label he is liable to be prosecuted. He can't say that he has paid the duty unless the label is there.

Mr. Boyd.—The manufacturer would have to put on labels for India not for France.

President.—If any man bought in matches in French territory and brought them into British India he must label them in order to sell them.

Mr. Boyd.—They would not do it. They would try and get the matches across the frontier and take a chance whether they are caught or not.

President.—Your difficulty is greater to-day because there is nothing to show on the boxes whether the duty has been paid or not, but in the other case there would not be this difficulty, because there will be this label to show that.

Mr. Boyd.—From a practical point of view that can never be done.

President.—The moment you see a match box without a label you say it is smuggled and you proceed against that man; that is evidence of smuggling. But to-day if a man is found in possession of a match box without a label you can't say that he has smuggled it.

Mr. Boyd.—It all depends on whether stamping is still in force or not. Everything that came to the frontier we stamped and passed and we used to raid the villages round the frontier.

Mr. Mathias.—You mean to say you opened all the packages and stamped the whole lot?

Mr. Boyd.—Yes, we had double staff to carry on the work at that frontier and the result was that we had to go round and raid these villages and sometimes came across godowns full of matches, sometimes thousands of them. You are not going to do that in frontier like this.

President.—What is the land frontier in Burma?

Mr. Boyd.—A thousand miles.

President.—Is there much evidence of smuggling through the land frontier?

Mr. Boyd.—Not matches. I wrote up to the Shan States and enquired whether they had any information, but they told me that there was nothing much coming through. I keep on asking the Superintendent, Shan States. He informs me that there is no instance of matches or cotton goods being smuggled into the Shan States from China. There were instances of small quantities of matches being smuggled through from Siam but the amount was very small and we have not kept a record.

Mr. Mathias.—Is there any smuggling by land?

Is there any duty on matches imported by land?

Mr. Boyd.—A little from Siam. All goods coming from the northern frontier bear no duty at all. I pointed this out to Government. I told Sir William Keith and Government that, if the Chinese once wake up to the fact that every inch of Burma was free, that would be a serious thing. Even as far as Bhamo goods come in duty free from Siam. It is perfectly legitimate, I can't do anything. You may see the same thing done one of these days through the north as regards matches or anything else, and it is perfectly legitimate.

President.—What about these smaller places in the Archipelago? Is there evidence of much smuggling?

Mr. Boyd.—A certain amount; we cannot tell how much there is as it is absolutely impossible to check. They can bring a certain amount round Siam; they can ship it anywhere round the coast, it is impossible to check them. They can get the things into Siam and get them into Burma.

President.—If the State itself was concerned the British Government could always arrange to enter into arrangements by which to protect its revenue, but if the State does so in collusion, it becomes more difficult. Take Siam, for instance, it may be that the State itself would not be in favour of smuggling, but when a smaller State is concerned which is in collusion with the smuggler

then the problem is more difficult. But so far as Burma is concerned you have not that problem, namely a state acting in collusion with the smuggler.

Mr. Boyd.—China is too hard pressed now. She cannot afford to do it and the distance is great and transport is expensive. Where the danger will come in is that they are working for roads from Rangoon to Tengyueh.

President.—What is the distance?

Mr. Boyd.—It is a fortnight's run by pack mule. That road goes right up to Yunan, but roads are not very good from Yunan to the hinterland, but when they have got good roads, then you will get Chinese matches coming out duty free. There are some already coming in but their quantity is very small.

President.—The real danger may arise from the Straits and Siam where there is better communication between Toungoo and Burma.

Mr. Boyd.—They get cigarettes to Bangkok from Singapore and then they come to Kumkarick by pack mules and from there to Rangoon by train. It is not very far, it takes about 10 days. They are able to under-sell everybody here. I had a million and a half of 555 cigarettes in my office which were being sold at 10 annas a tin and they were coming *via* Bangkok.

President.—What we are concerned with is the larger question of policy. We have to consider whether there is any possibility of smuggling and if there was to be both excise and customs what kind of label we should suggest. As regards the treaties of course we can only point out.

Mr. Boyd.—It does not extend to the Shan States.

President.—Supposing any article is manufactured in Shan States and comes into British territory.

Mr. Boyd.—It is all right, it is British India.

President.—Would you be able to levy excise duty on matches in Shan States?

Mr. Boyd.—Yes, if it is introduced under the heading "applicable to the whole of British India."

President.—The duty will be leviable.

Mr. Boyd.—Yes.

President.—There would be no question of customs.

Mr. Boyd.—No, because it is part of British India.

President.—Haven't they got any such rights as the Indian States?

Mr. Boyd.—I am not quite sure.

President.—In Kathiawad, for instance, some of them are a sort of ruling chiefs

Mr. Boyd.—Yes.

Mr. Mathias.—Have they excise rights?

Mr. Boyd.—I could not tell you.

President.—If they had excise rights, there would be customs barriers too.

Mr. Boyd.—The only place we have Customs at all is the railway line? Excise don't function in the Shan States at all. That is what they have told me. As far as I can make out, practically nothing comes out in the way of matches. There may be a small quantity of matches coming in to be sold in the villages, but not much.

Dr. Matthai.—Do they smuggle matches in small packets?

Mr. Boyd.—Yes.

President.—Now, according to the Taxation Enquiry Committee's report, they have altered the law in 1924 as regards the land frontiers.

Mr. Boyd.—Yes.

President.—So that all the penalties now applicable to Sea Customs, are, also applicable to land customs?

Mr. Boyd.—Yes, most important ones anyhow.

President.—You can levy the duty.

Mr. Boyd.—Yes.

President.—Is the bringing of goods without duty punishable?

Mr. Boyd.—Yes, these are the three sanctions, search, confiscation, and seizure.

President.—The two systems have been more or less assimilated.

Mr. Boyd.—They have brought the Sea Customs to apply to land customs.

President.—Is there any important provision under the Sea Customs which has not been extended to land customs?

Mr. Boyd.—I don't think so. They have given me all the power they can.

President.—Then the two big land frontiers are the Siamese frontier and the Chinese frontier.

Mr. Boyd.—Yes.

President.—And you have got very little establishment to look after the collection of the duty.

Mr. Boyd.—None at all.

President.—Who does this work for you?

Mr. Boyd.—I have got many men at Moulmein to watch the things coming in there. If I see anything coming on, I appoint a man as a Land Customs Officer and ask him to go up to Moulmein and stop. I have got no special staff under me for this. I simply utilise my Sea Customs Officers.

President.—Apparently at present so far as matches are concerned the smuggling is not on a sufficiently large scale to justify any special measures.

Mr. Boyd.—Quite.

President.—But it may develop.

Mr. Boyd.—I doubt if it will develop at all.

President.—I mean to say smuggling would not be profitable.

Mr. Boyd.—On matches there is a higher tariff but they are bulky.

President.—It would not be anything like what you found in the French territory.

Mr. Boyd.—No, their trouble is actually in Pondicherry. On the frontier there are one or two places. We have got a house part of which is French and part of which is English. That is why we have got a regular corps all the way round. Here we cannot get, because we have 100 miles of unchartered land.

Dr. Matthai.—They have brought it fairly under control on the frontier.

Mr. Boyd.—Yes. We have got a signed agreement.

President.—Would it be difficult for you to collect figures in future as regards the imports of these chemicals for the manufacture of matches with regard to the country of origin?

As regards the three principal raw materials, *viz.*, logs, splints and veneers, can you tell us where they come from?

Mr. Boyd.—We will send you a statement showing the amount of logs, splints, veneers and matches and also the countries of origin. Sweden and Japan are the chief countries. The other countries come to practically nothing.

Dr. Matthai.—As regards the figures about matches, how do they get the value of matches?

Mr. Boyd.—It is all invoice price.

Dr. Matthai.—Does it include landing charges?

Mr. Boyd.—It includes everything, landing charges, port dues, etc.

Mr. Mathias.—Does landing charge amount to 4 per cent. of the c.i.f. price?

Mr. Boyd.— $\frac{1}{2}$ per cent. on the value.

President.—When you charge *ad valorem* duty on top of that you can either charge on the market value or on the landed value *i.e.*, *c.i.f. plus* landing and other charges.

Mr. Garraty.—Yes.

President.—What I wish to know is does the question of exchange enter here?

Mr. Garraty.—Everything.

President.—You take the declared value.

Mr. Garraty.—Not whatever he declares.

President.—When you believe that the declared value is correct, you take that.

Mr. Garraty.—Yes.

President.—So that the value shown there would be correct according to the current rate of exchange.

Mr. Garraty.—Yes.

Mr. Mathias.—Do you take it at any fixed rate?

Mr. Garraty.—We get the rate supplied by the Bank and check it.

President.—You convert it into rupees.

Mr. Garraty.—Yes, in every case.

Dr. Matthai.—I find from the trade returns that Ceylon exported in 1925-26 to India 15,700 gross whose value is given as Rs. 13,000. It comes to less than a rupee per gross. Whereas in every other case it is very much more than that. I was wondering whether there was any mistake about that.

Mr. Boyd.—There must be some mistake.

Dr. Matthai.—Matches imported from the Federated Malaya States, are they all Japanese matches?

Mr. Boyd.—I could not tell you off hand.

President.—As regards foreign exchanges, I always understood that whatever the currency in which the transaction was done, the invoice would ordinarily contain the value in sterling. I don't know about Japan.

Mr. Garraty.—No, we get French invoices giving the value in franc.

President.—Do you?

Mr. Garraty.—Yes. It is only in the case of German goods that the value is given in sterling.

President.—In the case of steel we found that prices were generally quoted in sterling—no matter where the steel products came from.

Mr. Garraty.—Yes, that is as far as the Continent is concerned. But as regards America and Japan, they quote in their own currency.

President.—As far as matches are concerned, the principal country from which they are imported is Sweden. Are Swedish invoices in Swedish currency?

Mr. Garraty.—Yes.

President.—The Swedish exchange is more or less stabilised and you don't have much trouble.

Mr. Garraty.—No.

President.—But as regards Japan, the exchange fluctuates.

Mr. Garraty.—We get exchange rates every day from the Bank.

Dr. Matthai.—The Japanese exchange is fairly steady now.

Mr. Garraty.—Yes.

President.—You have no difficulty in ascertaining the actual value as far as exchange is concerned,

Mr. Garraty.—No.

President.—You say that the local wholesale price of Japanese matches is between Rs. 110 to Rs. 120.

Mr. Garraty.—Yes.

President.—Is that including the duty?

Mr. Garraty.—Yes.

President.—How do you get the wholesale price?

Mr. Garraty.—We get it from the market.

President.—The wholesale price of Rs. 110 to Rs. 120 would mean that the landed price is Rs. 35 to Rs. 45.

Mr. Garraty.—Yes, there is a duty of Rs. 75 on that.

President.—That is very much less than the figures suggest. Apparently the position is that the Japanese manufacturers pay part of the Customs duty.

Mr. Garraty.—I do not know how they are doing it. I cannot understand it myself.

Dr. Matthai.—When did you collect the selling price?

Mr. Garraty.—Just a few days ago. It is most extraordinary how the Japanese can do it.

President.—Then the cost of Swedish matches is about Rs. 45 to Rs. 50 and the wholesale selling rate is about Rs. 130 to Rs. 135.

Mr. Garraty.—Yes.

President.—They get a little more. They cover the duty anyhow. But in the case of Japanese manufacturers they sell below the import price.

Mr. Garraty.—This is the information that I got from the market myself.

Dr. Matthai.—When you collect the prices, do you collect them for full size boxes?

Mr. Garraty.—We get only one size of boxes from Japan. The Swedish price is 1s. 6d. per gross.

Mr. Mathias.—That is equal to one rupee. Is that the invoice price?

Mr. Garraty.—It is the landed cost.

President.—In their case they make the consumer pay the whole of the duty. But in the case of the Japanese manufacturers I am not so sure.

Dr. Matthai.—The difference between Swedish and Japanese prices is about four annas a gross.

Mr. Garraty.—Yes.

Dr. Matthai.—One of the manufacturers who appeared before us last week told us that the Japanese and Swedish matches were selling at about the same price.

Mr. Garraty.—The Japanese matches are sold at a lower rate.

Mr. Mathias.—You say that the Japanese matches are imported at Rs. 110 per 50 gross. If you deduct the duty, it comes to Rs. 35; whereas Swedish matches are imported at Rs. 130 and if you deduct the duty from that, it comes to Rs. 55. Your invoice price is one rupee.

Mr. Garraty.—That comes to Rs. 50.

Mr. Mathias.—In the case of Japanese matches there is no allowance for profit.

Mr. Garraty.—These are wholesale prices.

Mr. Mathias.—The point I am getting at is this. According to your figures the wholesaler makes Rs. 5 profit on the Swedish matches and he makes no profit on the Japanese matches.

Mr. Garraty.—He will probably get a commission at the end of the year.

Mr. Mathias.—It seems strange that they should make no profit.

President.—I want to be quite sure about this point. It is rather interesting. You have given the wholesale price of Japanese matches as Rs. 110 to

Rs. 120. Then you deduct the duty of Rs. 75 from that and give Rs. 35 to Rs. 40 as the c.i.f. price. The c.i.f. price is very much lower than the figures for the last 10 months suggest.

Mr. Garraty.—On account of the Swedish competition I suppose that the Japanese matches are selling very cheap.

Dr. Matthai.—Were their prices higher sometime ago?

Mr. Garraty.—They are fluctuating.

Dr. Matthai.—Has there been a marked fall?

Mr. Garraty.—Ever since Swedish matches began coming in, the Japanese prices began to fall.

Dr. Matthai.—I want to know whether there has been a marked fall recently?

Mr. Garraty.—These figures appear to be correct for the last two months.

President.—Can you give me the prices for the last two years month by month?

Mr. Garraty.—It will be a big undertaking to do that. I can give you the average price for the year if you want.

President.—What was the average price for 1925-26 for Japanese matches?

Mr. Garraty.—751,000 gross at Rs. 9,62,000.

President.—That is the import price.

Mr. Garraty.—Yes.

President.—I am now asking you about the wholesale price.

Mr. Garraty.—There is not the slightest doubt that the prices of Japanese matches have fallen considerably during the last year or two. Japan cannot compete against Sweden. Consequently she has got to sell as low as she possibly can.

President.—Has not also the Swedish price dropped?

Mr. Garraty.—The price of Swedish matches has been dropping too.

President.—I think that you are going to give us those figures. The local prices apparently are lower than those in India. At any rate they are certainly lower than the average prices for all India.

Mr. Garraty.—They would be lower.

Mr. Garraty.—I have got a figure of Rs. 125 for 50 gross for Swedish matches, that is Rs. 2-8-0 per gross.

Mr. Mathias.—Rs. 2-11-0 is our figure, so that Swedish matches sell at cheaper in Bombay than in Rangoon.

President.—This information that we are giving now is correct because the manager of the Swedish Match Company told us that the price was Rs. 132 for 50 gross.

Mr. Garraty.—That includes the landing charges.

President.—If you could send us the Swedish and Japanese wholesale and c.i.f. landed prices it would be of use to us. We want to see if any part of the duty is really paid by the manufacturer.

Mr. Garraty.—I will send you the information.

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BURMESE CHAMBER OF COMMERCE.

Evidence of Mr. THIN MAUNG, Delegate on behalf of the Burmese Chamber of Commerce, recorded at Rangoon on Thursday, the 30th March, 1927.

Introductory.

President.—Who is the President of your Chamber?

Mr. T. Maung.—Mr. M. M. Ohn Ghine, M.L.C.

President.—We are very sorry that we were not able to give you longer notice. It was really an oversight on our part. We should have sent you intimation earlier. But I am glad that you have been able to come here to assist us. When was this Burmese Chamber of Commerce founded?

Mr. T. Maung.—About 1918.

President.—It represents the principal Burmese Commercial interests.

Mr. T. Maung.—Yes.

Dr. Matthai.—How many members are there?

Mr. T. Maung.—Over 40 or 50.

President.—You have got a representative now on the Development Trust.

Mr. T. Maung.—Yes.

President.—You have also got one on the Port Commissioners.

Mr. T. Maung.—We refused it because they made it a conditional offer. We are on the Legislative Council, Burma.

President.—On the Corporation, I don't think that you have any representative.

Mr. T. Maung.—No.

Dr. Matthai.—Is any match manufacturer a member of your Chamber?

Mr. T. Maung.—No, but we have as members some match wood suppliers.

President.—Do you mean traders in matches?

Mr. T. Maung.—Traders in both match wood and matches.

Views of the Chamber on the existing duty on matches, etc.

President.—You are in favour of the continuance of the present duty.

Mr. T. Maung.—I am in favour of the continuance of the present duty because any increase in the duty tends to push up the price which would amount to indirect taxation.

President.—Would you have any objection to paying the same price as you would have paid for foreign matches with the duty?

Mr. T. Maung.—We have no objection, if you can control the price.

President.—What I mean to say is this. When the Government imposed the duty of Rs. 1-8-0 the price of foreign matches was about Rs. 1-2-0. So, the price in the country would be about Rs. 2-10-0. So long as the price does not rise above it, you have no objection.

Mr. T. Maung.—I have no objection so long as the price remains the same but it generally happens that when we impose a protective tariff, the prices of foreign manufacture go up. They may not go up immediately but the ultimate result is that prices will go up and it will be felt by the general consumer.

President.—As it happened, the prices did not go up because of the competition amongst the manufacturers in the country.

Mr. T. Maung.—Competition will no doubt keep down the prices. But I am afraid that the products of local manufacture are not up to the standard of foreign matches.

Quality of Indian made matches.

Dr. Matthai.—Do you mean the quality of the matches?

Mr. T. Maung.—Yes.

Mr. Mathias.—Your statement is rather sweeping. Would you class all manufacturers in Burma in that statement?

Mr. T. Maung.—Yes.

Mr. Mathias.—Are there not some Indian matches which are almost as good as foreign matches?

Mr. T. Maung.—In Burma, the local product is not as good as the foreign product.

Mr. Mathias.—Have you tried matches produced by Adamjee's?

Mr. T. Maung.—Yes.

President.—Formerly they used to make matches out of different classes of wood, viz., Letpan, Didu, etc. The colour was brown and not white. Now they make splints out of Sawbya, and in general appearance, quality, etc. Indian matches compare well with Swedish matches. This idea that Indian matches are inferior in quality grew in the country at the time when matches were made out of different classes of wood. Also it might have happened that importers had found it to their interests to say that Indian matches are inferior in order to sell their own matches. Look at the quality of these matches (samples shewn). Would you object to using these?

Mr. T. Maung.—We won't object to using these provided they keep down the price. If they want as good a price as is commanded by the foreign product, we won't be induced to buy.

President.—At present, big size matches, locally made, are sold at about Rs. 1-8-0 per gross, whereas Swedish matches are sold at Rs. 2-10-0? When you get Indian matches at this price, it is not a great hardship on the consumer, is it?

Mr. T. Maung.—Not, if the number of sticks be the same.

President.—There is one point that you have raised and that is that the proprietors should be made to guarantee to improve their products.

Mr. T. Maung.—Yes.

President.—It is very difficult to enforce that guarantee. What would happen is this that better classes of manufacture would, in course of time, push out inferior matches. That is all that may be reasonably expected. Can you suggest any way by which you can ask for a guarantee?

Mr. T. Maung.—Competition is the only way that can bring about an improvement in the quality.

President.—That is the main thing. If the industry establishes itself in the country, then the better class factories would produce a better class of matches and in that way either the inferior matches may go out altogether or they may have to sell at a much lower price.

Mr. T. Maung.—Quite. There may be inferior matches sold in the country, even in that way.

President.—Two different qualities cannot be sold at the same price.

Mr. T. Maung.—Take the case of German umbrellas and Burmese umbrellas. They are wholly different, produced by wholly different classes of people and under different circumstances. Both of them find a market. So also in the case of inferior and superior matches, they may find a market.

President.—But at different prices?

Mr. T. Maung.—Yes.

President.—What you want to ensure is that it should be seen that the quality of Indian matches does not deteriorate because of protection.

Mr. T. Maung.—Yes. What we are afraid is that superior matches of foreign manufacture might be entirely excluded so that there would be no competition whatever to improve the standard in Burma.

Dr. Matthai.—That is an important point.

President.—It should be made possible for the better quality of matches to come into the country so that the better quality may be maintained.

Mr. T. Maung.—Yes.

President.—But eventually the foreign matches must disappear.

Mr. T. Maung.—That is what we want. Of course the local industry must be encouraged.

Burmese labour.

President.—Have you any experience of the Match Industry? Have you been to any match factory?

Mr. T. Maung.—Although I have been to one or two factories I cannot claim any particular knowledge of the match industry.

President.—Do you know that a large amount of Burmese labour is employed?

Mr. T. Maung.—Yes.

President.—Especially in the box making and box filling processes?

Mr. T. Maung.—Yes.

President.—The evidence is that the Burmese women are particularly good at this kind of work. Do you think that there will be sufficient supply of that class of labour in Rangoon?

Mr. T. Maung.—I think, there is.

President.—There is, I think, a fairly large Burmese population in Rangoon and round about in the villages?

Mr. T. Maung.—Yes.

President.—You consider that it would be a good thing for the province to have an industry where people can get employment?

Mr. T. Maung.—It is good. That is why we should encourage the local industry simply to give employment to the proper classes of the people.

Import duties on raw materials.

President.—Then, you suggest that in order to encourage the local industry the import duty on raw materials such as special machinery, phosphorus, sulphur, etc., necessary for the industry, should be reduced.

Mr. T. Maung.—Yes, it is a very important factor.

President.—But, you see, there are certain raw materials used by the Match Industry which are also used by other industries, so that if they were to have a general exemption, the revenue may suffer a lot.

Mr. T. Maung.—That may be so.

President.—In any case, the burden of the tax on the imported raw materials is not very high. Assuming that they consume about four annas worth of chemicals in the making of one gross of boxes, it is about half an anna, so that it would not help the industry so very much even if the duty was removed. As I have told you before, you cannot remove the duty because the same chemicals are used by other industries. For instance, sulphur comes in free.

Mr. T. Maung.—What we mean by special machinery is machinery specially designed for match-making.

President.—The duty on machinery is only 2½ per cent. It is not an expensive item.

Mr. T. Maung.—Quite. But some encouragement should be given to help the local manufacturers because they may be afraid of a combine in foreign countries which may prevent the Indian manufacturers from getting their machineries, chemicals, etc., at a cheaper price.

President.—This would be necessary only if the proposal was that the duty of Rs. 1-8-0 should be reduced. So far as we can see there has been nothing like a proposal for the removal of the duty, except from one firm, I think. On the whole the majority of people are in favour of retaining this duty of Rs. 1-8-0. Now, if that duty is retained the question of the removal of the duty on raw materials does not arise because no change is required.

Mr. T. Maung.—That is so.

Forest Royalties.

President.—Then as regards the rate of royalty charged by the Forest Department. The royalty charged is very small, is it not?

Mr. T. Maung.—Yes, about Rs. 4 to 6 per ton.

President.—Of course Messrs. Adamjee Hajee Dawood and Company pay Rs. 12-8-0; that is perhaps because he wanted to be sure of his raw material. How much less can Government charge than Rs. 4?

Mr. T. Maung.—Formerly for letpan, didu and sawbya the royalty was Re. 1 per ton in pre-war days.

President.—They don't fix any royalty but people go and tender?

Mr. T. Maung.—Yes, people offer to pay high rate of royalty and Government accepts the highest tender of course!

Mr. Mathias.—In any case a royalty of Rs. 4 per ton comes to a fraction of an anna per gross; with transport charges and so on the price of wood delivered at the factory comes to Rs. 35 a ton?

Mr. T. Maung.—If you add heavy royalty over and above extraction and transport charges it would be very expensive. However, if the manufacturers do not grumble about the royalty why should we?

President.—Of course the most important point from their point of view is that they must get the necessary quantity of wood.

Mr. T. Maung.—I think they are the natural products of Burma and it only requires research to make them available in large quantities.

President.—You suggest planting, do you?

Mr. T. Maung.—Yes.

President.—We have gone into that question with the forest authorities.

Mr. T. Maung.—In the virgin forest there need not be any difficulty about match wood, I mean in the forests lying between Moulmein and Toungoo and Moulmein and Tavoy where there are heaps of match wood standing.

President.—It has been suggested that there are fairly large quantities in the Tenasserim division. Are you familiar with Pegu.

Mr. T. Maung.—No. I am only familiar with Pegu.

President.—Messrs. Adamjee Hajee Dawood and Company have got a lease in the Insein Division and they expect to get about 6,000 to 7,000 tons a year from that forest and the Government are willing to make experiments in plantation

Mr. T. Maung.—I think Government should not start this experiment in valuable reserves but begin with the fuel reserves in the neighbourhood of riverine and railway villages and make experiments there by planting, so that there can be less transport expenses.

President.—They have not yet decided where they are going to experiment. The main idea is that experiments should be undertaken and they are willing to take necessary measures in that direction.

Mr. T. Maung.—I see. So far as we are concerned our only anxiety is to safeguard the interest of the consumer and at the same time to see that the industry develops in such a way as to provide more employment to the poor and labouring classes of Burma. If you increase the duty everyone will feel that his pocket has been touched. No matter what the fiscal policy was everybody would like to have matches as cheap as possible, but if you increase import duty on foreign matches the price of foreign matches will go up and there will be this feeling of anxiety.

Dr. Matthai.—Is there any feeling in Burma that the price of matches is high?

Mr. T. Maung.—There is no such feeling at present, but what I suggest is that protection should not be at the expense of the consumer.

President.—Do you think that the smoking habit in Burma is increasing?

Mr. T. Maung.—I should think so. It is a national habit I should say.

President.—Do the Burmese use anything else for lighting his cigars?

Mr. T. Maung.—He uses matches now-a-days. Matches have become one of the necessities of life.

Conclusion.

President.—Before concluding our proceedings I would like to express on behalf of the Board its deep appreciation of the facilities given to us by the Government of Burma. The Hon'ble the Minister for Forests not only gave us a very cordial welcome to the Province, but he gave us every facility for collecting all the necessary data for the purposes of our enquiry. The Chief Conservator of Forests and the other Forest Officers showed a great deal of keenness in the proceedings and spared no pains to place before us all the information that they had in their possession. Our thanks are also due in a special measure to the Hon'ble the President of the Legislative Council, Mr. O. deGlanville, for the courteous manner in which he provided us with office accommodation in this very fine building. In fact, without this very good accommodation that we have had, our work would have been done under very great difficulties. We are also indebted to the Hon'ble the Chief Justice for having lent us the services of a very able interpreter. The examination was very largely facilitated by his assistance. The public bodies also, such as the Burma Indian Chamber of Commerce and the Burmese Chamber of Commerce, have also rendered us great assistance for which we are also very grateful. It has not been possible for the Burma Chamber of Commerce to come and assist us in this enquiry and we should have welcomed their assistance because they represent very great commercial interests in the province. However, they have told us that they are not in possession of any information which would be of use to us. I had personally hoped, however, that it might have been possible for them to collect some information which might have been relevant to the proceedings before us, and I hope that at some future date it may be possible for them to co-operate with us and to furnish us with their views on what appears to be a very important enquiry from the point of view of this province. Messrs. Steel Brothers and Company were good enough to come and give evidence before us from which we derived very great assistance. The principal applicants in this province, Messrs. Adamjee Hajee Dawood and Company have also been of great help to us. They have left no stone unturned to assist us and they have laid all their materials before us without claiming privilege as regards any of the facts mentioned either in their written representation or in their oral evidence. I think this is an example which may well be followed by other applicants when we tour India in connection with this enquiry.

THE BURMA INDIAN CHAMBER OF COMMERCE.

Evidence of Mr. RANCHORDAS H. GANDHI and Mr. K. M. DESAI,
recorded at Rangoon, on Thursday, the 31st March 1927.

Introductory.

President.—Do you hold any official position in the Burma Indian Chamber of Commerce, Mr. Gandhi.

Mr. Gandhi.—I am one of the members of the committee of the Chamber.

President.—Who is the President.

Mr. Gandhi.—Mr. Hosein Hamadane is at present the Acting President.

President.—Was it not possible for the President to appear?

Mr. Gandhi.—When the matter came up it was submitted to the Committee and I was selected to represent the Chamber unanimously.

President.—And Mr. Desai?

Mr. Gandhi.—He is the Secretary: he will assist me.

President.—Are almost all the Indian firms members of your Chamber?

Mr. Desai.—Most of them. We have 170 members.

President.—So that you practically represent Indian interests in Burma?

Mr. Desai.—Yes.

President.—What are the chief trades that are represented?

Mr. Gandhi.—Rice, timber, chemicals, industries and many others.

Dr. Matthai.—All the match industries here are members?

Mr. Gandhi.—Yes. All sections of the Indian trade are represented.

Dr. Matthai.—How long ago was your Chamber formed?

Mr. Desai.—In May 1925.

President.—Are any of your members also members of the Burma Chamber of Commerce?

Mr. Gandhi.—Very few. Messrs. Tatas and Adamjees are the only members who are also members of the Burma Chamber.

Dr. Matthai.—Is the Burma Match Company a member of your Chamber?

Mr. Desai.—No.

Mr. Gandhi.—I should draw your attention to the fact that we keep our membership open to all, not to Indians alone.

Mr. Mathias.—Which match factories in Burma are your members?

Mr. Gandhi.—Messrs. Adamjee Hajee Dawood and Company and the Rangoon Match Works.

Mr. Mathias.—And the Muslim Match Factory?

Mr. Gandhi.—They are not, but Mr. Abowath, who is the proprietor of the Muslim Match Factory is a member.

The Chamber's Representation.

President.—In the representation that you sent on the 30th November, 1926, you claimed that the industry fulfils the conditions laid down by the Fiscal Commission and you proposed that the present revenue duty should be declared a protective duty and should be maintained at its present level?

Mr. Gandhi.—Yes.

President.—There is a proposal by Messrs. Adamjee Hajee Dawood and Company, I think, that this duty should be increased to Rs. 2. What are your views? Do you think it should be kept at the present level?

Mr. Gandhi.—I think so.

President.—Do you object to any increase in the duty on the ground that it would raise the cost to the consumer?

Mr. Gandhi.—That is one consideration. Besides that I would like to lay before the Board my own proposals for the encouragement of Indian industry.

President.—Do you mean those you have given in paragraph 8 of your representation?

Mr. Gandhi.—I say that I do not want the duty to be raised to Rs. 2 for the reason that it would fall on the consumer, and then I propose certain safeguards by imposing restrictions on foreign capital.

President.—But supposing we came to the conclusion that an increase of duty was necessary and we also came to the conclusion that any increase in the duty will not raise the price of matches owing to internal competition, would you still have any objection?

Mr. Gandhi.—We would not oppose if you add a small amount.

Mr. Mathias.—What would you call a small amount?

Mr. Gandhi.—Four to eight annas.

Dr. Matthai.—You mean you won't object to a duty which would raise the price to the consumer by four to eight annas?

Mr. Gandhi.—Yes, provided my other conditions are fulfilled.

President.—At present it does not seem as if the duty has very largely influenced the course of prices. It has been shown that Japanese matches, for instance free of duty are sold at about 12 to 14 annas a gross and with the duty at about Rs. 2-2-0.

Mr. Gandhi.—There must be other factors also.

President.—The Swedish matches are sold at about Rs. 2-10-0, so it does not seem as if the duty has made very much difference to the selling price. There are other factors apparently at work which have helped to keep down the rise in prices.

Mr. Gandhi.—The whole of the duty would not be lost, I mean there must be some increase. It may not operate to the full extent, nevertheless it is bound to operate to a limited extent, other factors operating at the same time.

President.—That is true, but supposing the duty fulfils the purpose and leads to production on a large scale of matches in the country, then the prices will be regulated by internal competition, so that it does not necessarily follow that the import duty would raise the price of Indian matches. The duties may have the effect of keeping out foreign matches, but from that it does not follow that the Indian manufacturer of matches will be able to raise his price because of internal competition.

Mr. Mathias.—Even the price of imported matches, would be fixed by internal competition.

Mr. Gandhi.—Competition will have its influence felt, no doubt, but there are certain things to be considered. Suppose you recommend an increase of the duty not to Rs. 2 but to Rs. 3-8-0, then it would be too much for the consumer.

Mr. Mathias.—True, at the beginning it may have that effect, but once people begin to produce matches in the country—let us assume that there is no combination among the manufacturers and the prices are governed more or less by economic causes—in that case a high import duty would not necessarily have the effect of raising the internal price or enable the industry to get a higher price than it ought to get?

Mr. Gandhi.—Foreign goods are bound to come in for a number of years in the present conditions of the industry.

Dr. Matthai.—Your point is that prices may not rise in proportion to the duty?

Mr. Gandhi.—Yes, and existing circumstances are not going to change for a number of years, I mean foreign imports and the semi-foreign Indian factories here. My figures for this year also show that the imports have not gone down so much and there is not much difference between last year and this year. From these returns we must come to the conclusion that it is not continuously dwindling down.

President.—That is true. But at present the Indian manufacture of matches is not equal to the demand of the country. We contemplate a time when, if protection is recommended and the policy succeeds, India would be able to produce its requirements.

Mr. Gandhi.—That will be a period which will take not less than 10 years to come.

President.—It does not necessarily follow if you look at the progress the industry has made with the last year or so.

Mr. Gandhi.—But I say the progress is not so much as you are giving importance to. That is what I am trying to point out. Even the import figures have not come down to the extent we anticipated. There is a set back one year, then again there is a rise, I mean there is no steady decline; there are other factors operating and again there is a rush of imports. There is no continuous fall. If there was, I would certainly have agreed the Indian match industry is making headway.

Dr. Matthai.—In four years it has fallen from 13½ millions to 7½ millions, about half in four years.

Mr. Gandhi.—I am comparing last year's and this year's figures.

Dr. Matthai.—I am not comparing last year and this year. I am referring to the last four years. If you take into consideration the fact that it takes a little time to erect a large factory you will admit that is a remarkable progress.

Mr. Gandhi.—Nevertheless there are other factors, prejudice against Indian matches, training of labour, supervision and various other things, regular supply of wood, then there is the question of supply of capital. If we take all these into consideration and the present condition of India about raising new capital at a stroke, I say we must not come to the conclusion that it would be so rapid as to create fears about loss of revenue at a very high speed.

Dr. Matthai.—That is to say taking Burma the increase in the output of local factories in the past two years cannot be taken as the measure of the progress that is possible in the future?

Mr. Gandhi.—That is so.

President.—Your contention is that Government should not take into account this factor of revenue to any great extent?

Mr. Gandhi.—That is my main suggestion, and I ask you to declare it a protective duty. That is what I mean.

President.—But supposing it is found that this is a good source of revenue for Government, why should they give it up provided the interests of the industry are at the same time safeguarded?

Mr. Gandhi.—That is what I am aiming at. I mean to say that the interest of the country and also the Government revenue will be safeguarded in the long run. If you take a long view of the thing, Government is not going to suffer to a large extent.

President.—You say Government will not suffer very much because they will get the duty on the materials?

Mr. Gandhi.—I have got figures with me showing an increase of about Rs. 8 lakhs in the import duty from several chemicals used in the manufacture of matches during this period, though I don't mean to say that all these chemicals were exclusively used for match making.

President.—The way to look at it is this. Supposing the total value of the materials—I don't know what the exact figure is—taken together is 4 annas and the value of wood is, say 4 annas, that is 8 annas. If the Government gets a duty of 15 per cent. *ad valorem* it comes to only 1½ annas. But the Government expects to get Rs. 1-8-0 per gross, so that the result will be that Government may recover 1½ annas through the materials but loses Rs. 1-8-0 on the finished article.

Mr. Gandhi.—You have not taken the income-tax into account.

President.—I am coming to that. Income-tax can only arise out of profits. If you take a gross of matches at Rs. 1-8-0 and supposing you add 10 or 12 per cent. on it, it comes to 2 annas. The income Government would get on 2 annas would be very small, it would not be a substantial figure. Even if you apply the super-tax rate, it would only get about a quarter of an anna. You see, Mr. Gandhi, these two sources of revenue would not bring to Government more than 3 annas a gross whereas Government gets a duty of Rs. 1-8-0.

Mr. Gandhi.—These are hypothetical figures.

President.—No. Mr. Bawaney claimed that Rs. 1-8-0 was his cost of production. That is what we got from them. I am just trying to point out that if the Government looked at it purely from the revenue point of view, it would be a pity to let it go and in such a case some method must be devised by which Government does not lose its revenue.

Mr. Gandhi.—According to your calculation even if it comes to 8 or 10 annas Government would lose annas 14 to rupee 1. To that extent it may be true but you must look at the larger aspect of the question.

President.—Government looks at it from a material point of view. If Government finds it is a very useful source of revenue and that people have got used to paying this tax, and that it would be a pity to let it go, in such a case some method must be devised by which Government does not lose its revenue.

Mr. Gandhi.—I agree to some extent, but I don't agree with your conclusion that it necessarily follows that all foreign imports will cease.

President.—That is the aim of protection. We are assuming that the imports will disappear. They have fallen down by about 40 per cent. The policy of protection will have failed if foreign matches still enter the country.

Mr. Gandhi.—If 10 or 20 per cent. still enters.....

President.—Why should even 5 per cent. enter if the policy of protection succeeds?

Mr. Gandhi.—It must take time for the imports to fall off completely.

President.—Therefore in making our proposals we have to consider this: Supposing Government wanted to get the revenue and at the same time desired that if a case was made out the industry should be protected, then is there any escape from an excise duty?

Mr. Gandhi.—The excise duty would, as you know, be a burden on the indigenous industry.

President.—Not necessarily.

Mr. Gandhi.—We removed the excise duty on the same ground from cotton.

President.—That was quite a different thing. The position here is this. Before the imposition of the duty the prices of imported matches were Rs. 1-2-0. The Government imposed a duty of Rs. 1-8-0. Therefore the Government intended that matches should be sold at Rs. 2-10-0. To-day Indian matches are sold in the country at Rs. 1-8-0 or Rs. 1-12-0, so that if an excise of one rupee was added to it, then the price of Indian matches will not rise very much above Rs. 2-12-0 and the price of foreign matches would rise to about Rs. 3-10-0.

Mr. Gandhi.—I am not sure of maintaining these proportions. I think that, as developments occur, the prices may vary during the course of 3, 5 or 7 years.

President.—But the incidence of the duty is limited by the amount of the duty. Prices may vary. If you put one rupee duty, its incidence cannot be higher than one rupee.

Mr. Gandhi.—It won't be higher.

President.—It may be lower.

Mr. Gandhi.—I grant you that.

President.—The point I am trying to explain to you is this: At the time of the imposition of the duty Government contemplated that for matches in the country, the consumer should pay Rs. 2 to Rs. 2-10-0. If the price to the consumer does not rise much above that.....

Mr. Gandhi.—But they are getting an inferior quality of matches.

President.—That is a point we have to take into account. Apart from the question of quality it would not be unfair to the consumer if he was made to contribute what Government originally intended that he should.

Mr. Gandhi.—I cannot agree wholly, because there are certain factors which are always operating.

President.—They will operate whatever the position is. I am trying to point out to you that so long as the price of matches in the country does not rise much above the level that the Government intended when it imposed a duty of Rs. 1-8-0, you would not have any serious objection.

Mr. Gandhi.—I would have serious objection. I want the whole situation reconsidered, because those factors on which the Government based their decision 3 years before are not the only considerations which should weigh at present.

President.—We are prepared to take into consideration all the factors that you may mention. I am putting to you a simple proposition. Government wants a certain amount of revenue from matches. It fixes that at Rs. 1-8-0 on the imports. Government then intended that the consumer of matches should buy his matches at Rs. 2 or Rs. 2-10-0. Now the position is that the prices are not governed in this way.

Mr. Gandhi.—Why do you take it for granted that Government came to that fixed limit of Rs. 2-10-0? Why should we not think Government at that time must have based the idea of prices on previous experience that the duty amount and the prices don't always tally. I should request you to see why you take the maximum amount that Government intended should be paid by the consumer.

President.—So far as its revenue was concerned, it budgetted at that. At the time of the imposition of the duty it must consider how it would affect the consumer if the prices rose to the full level of the duty.

Mr. Gandhi.—Our own experience will show that Government was not right. Prices are not keeping pace with the duty.

President.—As a matter of fact Swedish matches are being sold at Rs. 2-10-0 a gross.

Mr. Mathias.—May I put it this way? In imposing a tax, it is obvious Government must consider the maximum burden which it thinks might be borne by the consumer and the maximum burden as the President has explained to you just now would be about Rs. 2-10-0.

Mr. Gandhi.—Government only thought that the maximum would be Rs. 1-8-0.

Mr. Mathias.—The duty is Rs. 1-8-0. By maximum burden I referred to the price.

President.—If the price rules at about that level, then the consumer cannot complain that the position is much worse under the excise duty than it would be under the customs.

Mr. Gandhi.—He is likely to complain that it is higher.

President.—If the price of matches is to improve; if there is no manufacture in the country and if he has to depend on the foreign matches, then he may have reason to complain.

Mr. Desai.—At present people are accustomed to the Indian price. They are getting Indian matches at Rs. 1-10-0.

President.—But then the Government says "We are losing revenue. We have enabled you to get the matches cheaper and so we must have a share of the revenue".

Mr. Desai.—Matches are used even by the poorest men.

President.—So is salt and so are good many things. We are not going into that question.

Dr. Matthai.—Is it your suggestion that when the Government imposed a duty of Rs. 1-8-0 it imposed too high a duty?

Mr. Gandhi.—If there is no possibility of the development of the Match Industry, I would consider the imposition of Rs. 1-8-0 as too heavy, but it has fortunately helped the development of the Match Industry.

President.—It doesn't seem to have interfered with the demand. The demand is going up. One test of taxation is whether first of all it reduces consumption and secondly whether it raises the prices. In both these respects the country has been very fortunate. It has not raised the price nor has it reduced the consumption. What has happened is that it has reduced the Government revenue.

Mr. Gandhi.—But it has not increased the consumption.

President.—There is some evidence that it has. If you take into account the manufacture in India, there is some evidence that anyhow it has not decreased.

Dr. Matthai.—All that it has done is that it has reduced the imports and consequently the revenue.

President.—It is one of the things we have got to enquire into and report on. It is for that reason I am asking you.

Mr. Gandhi.—My contention is that the consumer must not be made to pay anything higher than what he is paying to-day.

Mr. Desai.—He should not be made to pay anything more than what is absolutely necessary for the development of the industry.

President.—The consumer should not be made to pay more for Indian matches than he would if he were to depend on foreign matches.

Mr. Gandhi.—If we can arrange in such a way that he would not have the necessity to pay higher, then we must devise means without raising the duty.

President.—What will happen is this. Supposing we put an excise duty of one rupee and we increase the import duty by Re. 1, the relative position remains the same. Then if there is more production in the country and there is more competition in the country, it may happen that in spite of the excise duty the consumer would get his matches cheaper.

Mr. Gandhi.—While you make sure of the revenue, only the consumer has the chance. The chance may also work against him. That is also possible.

President.—Quite. In making our proposals we have got to take into account what would be the price that the consumer will have to pay in the long run.

Mr. Gandhi.—I would like to put it in another way: Let the Government continue the duty at present and watch the movement for the next three or five years.

President.—It is a very serious risk for the Government to run. It is like any other tax.

Mr. Gandhi.—I quite understand and appreciate.

President.—If you impose a tax, you complain about it and say "this is inevitable and we have to pay it." But if, after having removed a tax, the Government wants to re-impose it, they will get serious criticism.

Mr. Gandhi.—I don't suggest a reduction of the tax. I suggest to keep the duty at Rs. 1-8-0.

President.—What I mean is that to the extent the Government revenue decreases the tax decreases.

Mr. Gandhi.—Certainly it would.

President.—If the Government allows that tax to decrease, it is very difficult for the Government afterwards to re-impose it.

Mr. Gandhi.—I don't follow why it would be difficult.

President.—Every Chamber of Commerce will say "Now for 5 years we have paid no tax. Why should Government impose any fresh taxation"?

Mr. Gandhi.—Do you want me to say things which are contrary to what every other Chamber says?

President.—You are perfectly entitled to say what you want. But the Government are also entitled to say "Why should we court trouble. Here are people paying this tax, let them go on paying".

Mr. Gandhi.—My point is that there is not a large decrease in revenue. It is only Rs. 36 lakhs or something like that.

President.—That is a big sum.

Mr. Gandhi.—It does not come to even $\frac{1}{2}$ per cent. of the military expenditure.

President.—We are given certain figures and they show that the revenue is steadily decreasing. From the practical point of view if the Government really desires to get this revenue, it should see that it is not allowed to lapse.

Mr. Gandhi.—I don't see in the Communiqué so much emphasis laid as you make out. There is plenty of latitude given to the Board in the Communiqué.

Mr. Mathias.—It is really a question of ways and means. Whether Government imposes an additional tax or not is a matter which must be decided by the Government and the Legislative Assembly. We are concerned with considering the ways and means, which Government may or may not approve of making good the deficiency in revenue.

Mr. Gandhi.—So far as I am concerned, I should put it this way that Government must declare the match industry as a protected one irrespective of other considerations. I am not in a position to give you a correct idea in favour of my proposition aided by figures, because there are no figures available either on this side or on that side.

Mr. Mathias.—The business before the Board is to suggest ways and means. If Government and the Legislative Assembly decide that it is desirable to obtain an additional revenue of Rs. 36 lakhs from the Match Industry, what are the ways and means which the Board would suggest by which such a tax could be imposed with the least trouble.

Mr. Gandhi.—That I have put in one of my suggestions. At least for some time it would be effective in creating more revenue for the Government. If you like I would give you a copy (handed in a note regarding restrictions on foreigners).

Mr. Mathias.—Are you empowered to place this before the Board as the opinion of the Chamber?

Mr. Gandhi.—The Chamber's views are summed up in paragraph 8 of their letter dated 30th November, 1926. They say:—

"The import duty on matches, splints and veneers should be declared a protective duty and the present rates of duty should be maintained.

A discriminating excise duty on the product of factories, financed wholly or mainly by foreign capital must be levied; but under no circumstances should any burden be imposed on factories run purely by Indian capital and Indian enterprise".

In that general way my Committee has approved of this, but I have on my own initiative put in the details.

Mr. Mathias.—But the Chamber is not in any way committed to these details.

Mr. Gandhi.—Certainly not. I had no time to put it before the Committee.

President.—Of course we should consider your views, but it would be better if the Chamber supported your views.

Mr. Gandhi.—I will put these details before the Committee and will let you know afterwards.

President.—Your suggestion is that there should be a sort of differential treatment as between foreign and Indian firms. The first thing is that you are apparently referring to the Swedish Trust, is not that so?

Mr. Gandhi.—Yes.

President.—As far as we have any evidence, the Trust seems to operate in a peculiar way. It does not come forward as a Swedish Company. But it does many of the things you mention.

Mr. Gandhi.—I know that.

President.—It starts a company in the country with rupee capital. On the Board of Directors of the Company, there are well-known Indians.

Mr. Gandhi.—They are in a minority. Out of seven, there are only three Indians in the case of the Assam Match Company.

Dr. Matthai.—The capital is rupee capital.

Mr. Gandhi.—Yes.

President.—You cannot treat British subjects as foreigners.

Mr. Gandhi.—In this enquiry English competition must be treated as foreign competition.

President.—What they have done in this case is this. First of all, there was the Swedish Company. Then, they floated extra capital outside Sweden, particularly in Great Britain. In that way British capital has been brought in. At present, so far as we are concerned, I don't think that it would be right to describe that as foreign capital.

Mr. Gandhi.—Subject to the conditions laid down by the External Capital Committee.

President.—Having done that, they come to India and they also go to other countries. They start a local company in the currency of the country and get a majority of Directors who are not Swedes. They are either residents of the country or British subjects. Therefore it is very difficult for instance to describe this capital, if it operates in this way, as an entirely foreign capital.

Mr. Gandhi.—By whatever name you may describe it, you must agree with me that it is very essential for the welfare of India that the Indian manufacturers must be protected against what we may call unfair competition.

President.—I am trying to point out to you the difficulties.

Mr. Gandhi.—I quite realise the difficulties. In the present state of conditions I admit that it is very difficult to find out a proper solution to remedy this evil.

President.—Supposing the foreign capital has made up its mind that it shall establish itself in this country or in any other foreign country, then every time you devise something to meet a particular condition, it would devise something which would enable it to evade that condition.

Mr. Gandhi.—Not always.

President.—Now we will take your conditions one by one. You say that no company should be allowed to manufacture matches in India unless it is registered under the Indian Companies Act, 1913, and it has a share capital the amount of which is expressed in the memorandum of association in rupees. That has been done.

Mr. Gandhi.—Yes.

President.—Then you say that no company, having for its object the manufacture of matches in India, should be registered unless at least 75 per cent. of its authorised capital is reserved for Indians in the first instance for a definite period of time. First of all, supposing they cannot get 75 per cent. capital from Indians, do you mean to say that the industry should not be started here?

Mr. Gandhi.—“In the first instance and for a definite period”—I have qualified my statement to that extent.

Mr. Mathias.—Will your condition be fulfilled if the prospectus states that three-fourths of the capital will be reserved for Indians for three months or say six months?

Mr. Gandhi.—I would put even a longer period.

Mr. Mathias.—Is that your intention?

Mr. Gandhi.—My intention is that you must give them some time.

Dr. Matthai.—After that period, you would make no restrictions.

Mr. Gandhi.—The restrictions would continue.

Dr. Matthai.—I mean as far as the reservation of capital is concerned.

Mr. Gandhi.—Further on I have suggested that Government sanction is required for doing certain things.

Dr. Matthai.—Won't that depress the value of the shares in the country?

Mr. Gandhi.—Yes.

Dr. Matthai.—That is a serious matter for a new concern.

Mr. Gandhi.—Quite.

President.—This was one of the points considered by the External Capital Committee. Supposing they reserved 75 per cent. of capital for Indians and they got Indians X, Y & Z to take it up, the condition being that, after the period of three months, the shares should be transferred to Swedes or their nominees, how could you stop that?

Mr. Gandhi.—My own opinion is that in the present condition of things, if the match industry is declared to be a protected industry, there would not be much difficulty in raising the required capital. Indian capital would certainly be forthcoming provided of course Government declared the Match Industry to be a protected industry.

President.—You want 75 per cent. of capital to be first subscribed by Indians. They will say “all right, we have got the capital”. They get dummies X, Y, Z to subscribe for that amount. After three months, the law of the Trust is such that they cannot continue in the Trust afterwards without going to jail. That being so, the foreigner is quite safe in having a sort of *benami* transaction and he may say after the period has expired “now, come along, transfer the shares to me”. What is your remedy for that?

Mr. Mathias.—Even without *benami* transaction, you have heard of people applying for shares in a new issue in order to sell them for a fractional profit.

Mr. Gandhi.—There would be cases, but there would not be many provided my sliding scale is adopted.

President.—I shall come to that presently. The objection to the sliding scale is this that it would vary.

Mr. Gandhi.—It must.

President.—Then, it would mean this that no one would buy those shares because the value of the shares will fluctuate according to the sliding scale. Who would invest in an industry like that, the return from which is so uncertain?

Mr. Gandhi.—There are countries which do that.

Mr. Mathias.—Can you name the countries and the companies?

Mr. Gandhi.—Yes (handed in a note on “Restrictions on foreign capital and foreigners doing business in various countries”).

Mr. Mathias.—Under Spain, it is stated that in order that firms may be qualified for receiving *certain benefits* under Spanish Royal Decree, they must comply with some conditions. May I ask what those "certain benefits" are?

Mr. Gandhi.—They were not mentioned in the Board of Trade Journal from which I copied this.

Mr. Mathias.—Presumably they must be bounties.

Mr. Gandhi.—May be.

President.—Where did you get this information from?

Mr. Gandhi.—I shall send you the sources of information from which I have copied all these, later.

Mr. Mathias.—Take the case of Sweden. You don't say when the legislation was brought in. It is rather important to know that.

Mr. Gandhi.—We have not omitted or added anything. We have simply copied from the official organ of the Board of Trade published in London.

Mr. Mathias.—Have you any information as to the dates on which these laws were introduced in those countries?

Mr. Gandhi.—I have no further information.

President.—As regards the argument contained in (b) of your note on "Restrictions on foreigners," it was fully discussed by the External Capital Committee. They came to the conclusion that in the first place it would be easy to evade those conditions and that, in the second place, it would so affect the value of the shares that capital would not be forthcoming. I have no views on that subject. I am simply trying to point out what has been done before.

Mr. Gandhi.—My own views are that these Indian factories are to be found all over India and that they are not like a monopoly or a new industry of which people do not know at all. Therefore I do believe that there would not be such dearth of capital that shares would go down.

Dr. Matthai.—You think that for the match industry sufficient capital would be forthcoming in India.

Mr. Gandhi.—Yes. Supposing the match factories in Bombay are not getting sufficient amount of capital in Bombay

Dr. Matthai.—Some other provincial market will come forward.

Mr. Gandhi.—Burma, Bengal or Madras may come in. There would not be any difficulty.

Dr. Matthai.—The difficulty may arise if the industry is on a very large scale and involving a very large amount of capital. In the case of a new match company, in the near future, the operations are not likely to be on so large a scale as to make it impossible to raise capital in India. Is that your point?

Mr. Gandhi.—Yes. It would not be so difficult as, say, in the case of the Steel Industry.

Dr. Matthai.—Or like a railway company.

Mr. Gandhi.—Yes.

Dr. Matthai.—May I raise a small point? You say that 75 per cent. of the capital should be reserved. Supposing they arranged capital in such a way that 75 per cent. of the capital carried with it only 25 per cent. of the voting power, thus retaining the control in their own hands.

Mr. Gandhi.—As I expect that the future match companies will bring in dividends, the profits should go to the country.

Dr. Matthai.—I take it that you are not objecting necessarily to foreign capital as such because you are getting various advantages by the use of foreign capital. What you are objecting to is not foreign capital but a foreign monopoly.

Mr. Gandhi.—Both.

Dr. Matthai.—Even to a foreign concern working in ordinary competition with Indian concerns.

Mr. Gandhi.—I object to big concerns which would eventually be in possession of the whole market.

Dr. Matthai.—Not necessarily in possession of the whole market.

Mr. Gandhi.—If a foreign company operates in such a way as to ruin Indian manufacturers, to that extent I am opposed to foreign capital.

Mr. Mathias.—Does it not come to this that you are opposed to a trust?

Mr. Gandhi.—I am opposed to a trust.

Mr. Mathias.—What I am not quite clear about is whether you are opposed to a trust as such or whether you are opposed to foreign capital in competition with Indians here.

Mr. Gandhi.—I am opposed to trusts of all kinds, because the burden would eventually fall on the consumer. As there is no Indian trust in existence and as there is no likelihood of any Indian trust being started, I am not referring to that at all.

Mr. Mathias.—That does not mean that you are opposed to foreign capital as such. You are opposed to foreign capital only when it acts as a monopoly.

Mr. Desai.—I am opposed to foreign capital being employed in an industry which is protected.

Dr. Matthai.—We are speaking of the match industry for the time being. Supposing you have an industry for the development of which it is impossible to raise enough money in India, in that case, you would not rule out foreign capital, would you?

President.—But by foreign capital you mean entirely alien capital, do you not? Supposing a British company came here instead of the Swedish, would you object?

Mr. Gandhi.—I would follow the line of argument of the External Capital Committee about a certain percentage of Indian directors and so on.

President.—That can be complied with, but at the same time the capital may be still foreign, the control may be foreign.

Mr. Gandhi.—Then I would certainly object.

President.—How can you make your objection effective?

Mr. Gandhi.—The remedy is to be devised. I am afraid I can't suggest any remedy, but why anticipate the difficulty?

President.—So far these people have complied with many of the conditions laid down by the External Capital Committee, but at the same time you say the foreign capital is there; it is operating in this way.

Mr. Gandhi.—To some extent. I have made some recommendations which would go a long way towards progress, nevertheless if the recommendations fall short of the expectations, I hope the Tariff Board will enquire into the matter further and find means to help the industry.

President.—The Tariff Board is very glad that you have made these suggestions and they would consider all the points. But I am just trying to point out to you that the suggestions may be all right, but the thing is how to make it effective. How are we going to do it?

Mr. Gandhi.—As a lay man I am afraid I cannot suggest anything.

President.—Your main contention is this; that some of the conditions may be evaded but that it is not possible for them to evade all of them successfully.

Mr. Mathias.—In any case it would give Indians an insight into the industry of match making and some of your conditions would ensure that Indians would be given practical training for higher appointments; to that extent you suggest that your recommendations would benefit the country. Is that right?

Mr. Gandhi.—That is so.

Mr. Mathias.—But you would not claim, I gather, that these proposals which you have put forward will be necessarily effective in preventing a combination and control by foreigners to the detriment of the Indian industry?

Mr. Gandhi.—To an appreciable extent it would prevent foreign concerns coming in the way of Indian industries.

Mr. Mathias.—Do you claim that these conditions are such as could not be got round by any enterprising foreign firm.

Mr. Gandhi.—In human affairs underhand dealings are not preventible.

Mr. Mathias.—Quite so. I wanted to ascertain to what extent you think your proposals would be effective.

Mr. Gandhi.—To some extent my proposals go further than the External Capital Committee's recommendations.

Dr. Matthai.—What you suggest is that the existence of a law of this kind may not entirely prevent the evil, but minimise it; that is the real position, is it not?

Mr. Gandhi.—Yes, to an appreciable extent.

President.—The thing is that it would be to the advantage of this country that whilst it should be able to protect itself against foreign monopoly and the employment of foreign capital, it should not frighten away all foreign capital.

Mr. Gandhi.—There is already foreign capital in India; it has not been frightened away and I have put my proposals in a way that it will not force them to give up their factories. I have put it in quite a compromising way.

President.—In (c) and (d) also there is this question how to enforce this rule about 75 per cent. of the capital being subscribed by Indians. In (d) you say "If possible, every foreigner should be required to obtain permission from the local Government, to join the Board of Directors or the firm of Managing Agents, and the local Government before granting such permission shall enquire as to whether the applicant is directly or indirectly connected with any foreign Trust or combine whose activities are in any way prejudicial to the interests of the Indian match industry." You would be throwing on the Government on the one hand very troublesome duties and on the other the directors may have to be appointed at once and the business may be seriously damaged if there was any delay in the appointment of the Board of Directors.

Mr. Gandhi.—I don't think a *bonâ fide* concern would take a long time in appointing the Board of Directors. It would not be difficult to make enquiries about the persons in the province where the factories are situated, and it would not necessarily take a long time.

Mr. Mathias.—Who is to know that the man making the enquiry does not belong to the trust?

Dr. Matthai.—It is quite easy in our country to raise dummy directors?

President.—They may have all Indian directors in name but the power behind the throne may be entirely foreign. It is very easy to get 5 names. In fact to-day you would find very big names on the board of directors in odd places who do nothing at all but simply go and earn their fees, while the real directors and managers are entirely different from the actual board of directors. (1) This is quite common, not only in India but everywhere. So that in a condition like that it cannot be enforced at all.

Mr. Gandhi.—Do you mean to say it would entail any serious hardships?

President.—They will say "We will get five Indians who will constitute the board of directors." They attend the meetings and their names will be entered in the minutes while at the same time the real directors may be foreigners who will entirely control the show. If you are to impose a restriction, it must be such that it can be reasonably enforced at any rate.

Mr. Gandhi.—I am not in a position to give you exact details.

President.—Even to-day take the board of directors in any company in London, Calcutta or Bombay. They are directors only in name and you will find the names of some of these men appearing in 30 different companies; they attend the meetings, add respectability to the Board: they get their fees and there their responsibility ends.

Mr. Gandhi.—I have made these suggestions and I leave the rest to the Board. If they can find a better solution, that will be to the advantage of the industry.

President.—In the next paragraph you suggest a sliding scale. As I have pointed out to you earlier it means that the shareholders' list has to be maintained according to a particular percentage. To-day, for instance, there is 40 per cent. of foreign capital, I have taken 100 shares. They will charge 1½; tomorrow some other shareholders change their minds and they say "we will sell these holdings to foreigners. Then I suffer; I say I maintain the same number of shares, I have not done anything and then I say why should I put in my capital in a company like this because I do not know what is going to happen. Would not this difficulty arise?"

Mr. Gandhi.—I don't think so, because notwithstanding all precautions these changes are likely to happen.

President.—It would frighten away capital. To-day the percentage of foreign capital is 40 per cent.; I don't mind. But some of the shares might change hands all of a sudden and then I find that the dividend has been reduced by half and I lose the value of the shares. In such a case I will say I am not going to invest in a company like this, because I do not know how my shares will stand.

Mr. Gandhi.—There will be so many less foreign companies. This provides against the tendency you have mentioned. It would ultimately come to this that Indians would begin to realize that it would be safer to have their own companies.

Mr. Mathias.—May I suggest that it would also apply to an absolutely Indian company. I will say 50 per cent. of the shares are held by foreigners at a particular time?

Mr. Gandhi.—If an Indian company behaves in a way which does not help the industry, then it must bear the consequences.

Mr. Mathias.—My point is this, that in such a case you will find no one will invest in the match making industry at all.

Mr. Gandhi.—I don't think so. There are precedents in other countries, specially Japan.

President.—Then there is another objection. You know there are two kinds of limited liability companies, the private company and the public company. In the private company, supposing two men form a company, in that case now could you enforce any of these restrictions? A private company has got many advantages one of them being that it can easily evade the law and another is that it enables public companies to be started. As you know they are started as private companies and then they float a public company. It would be fatal to business if the private companies were subject to these restrictions because public companies won't be started then. When you talk of a company do you mean a public company?

Mr. Gandhi.—I mean a public company but nevertheless I never meant that private companies should take advantage of that.

President.—But they can quite easily.

Mr. Gandhi.—Then the whole plan will be frustrated.

President.—Take the case of the Swedish Trust. It takes two other Indians and these three become a private company. There is no sale of shares; you don't know what is happening. Their nominal capital may be Rs. 100 or Rs. 500 but at the same time their real capital may run into crores. In that case you cannot apply this sliding scale so long as there are three shares.

Mr. Gandhi.—Then I would suggest a sliding scale with sliding scale on profits also, because the nominal capital may be anything but the real capital must be big otherwise there would not be big dealings, so I would go so far as to supplement my suggestion that there should be a sliding scale with a sliding scale on profits also.

President.—It will happen like this. The income-tax authorities do not know what the profits are because they will say "our capital is Rs. 1,00,000 but we have to employ an expert on Rs. 30,000 a year? No one can say they should not spend Rs. 30,000 on an expert. All the profits will then disappear. You cannot prevent a company from employing anyone he likes.

Mr. Gandhi.—I have already stated at the outset that my plan is incomplete, but why anticipate these difficulties?

Dr. Matthai.—It would be less objectionable to levy an income-tax in the case of both private and public companies, would it not?

Mr. Gandhi.—I would not object to that.

Dr. Matthai.—Assuming that other objections do not stand, that would be a less unsatisfactory way of doing it?

President.—As regards foreign individuals and firms, they are open to the same objection that we have discussed.

Mr. Gandhi.—Yes.

President.—The last point about Trusts and Combines is an important one.

Mr. Gandhi.—Yes.

President.—You object to any trust whether it is foreign or Indian, is not that so?

Mr. Gandhi.—Yes.

President.—And therefore you suggest some anti-trust legislation.

Mr. Gandhi.—Yes.

President.—You have not told us what form that anti-trust legislation should take.

Mr. Gandhi.—My difficulty was that I couldn't get copies of the American legislation.

President.—Do you think that the American legislation has been successful?

Mr. Gandhi.—I also know that it has not been successful to a very large extent.

Dr. Matthai.—It is hardly successful.

Mr. Gandhi.—That is a matter of opinion. As far as I am concerned I have not that up-to-date knowledge on which I can give any definite opinion as to its success or partial success or failure.

President.—Now take the case of the Swedish Company. This Company has already established itself to a certain extent in India. Supposing Government said "we must stop this," do you think that Government would be justified in adopting that course after the Company has established itself to some extent in the country? Of course if the law says that a certain thing has ceased to be lawful, the party has to take the consequence, but before the law is enacted, Government has got to take into account the fact whether the law should be applied with a sort of retrospective effect. The answer may be that the Company must have known the risk attached to the formation of a trust.

Mr. Gandhi.—If I go to America, I have to obey the American laws.

President.—You have got to obey the law of the country, but when the country changes the law that country has got to take into account how it is going to affect people who have come into the country already and invested their capital.

Mr. Gandhi.—If it doesn't come into conflict with Indian interests to that extent, I would have no objection to Government taking that into account,

but if it comes into conflict with Indian capital or Indian industry, then I don't think it is the duty of Government to consider their nationalities in deciding their policy.

Dr. Matthai.—You may go into a country for a lawful purpose, but when after having gone you engage in practices which are unlawful, the country is entitled to say "It was all right when you first came in, but since then, you have been doing things which are against public interest."

Mr. Gandhi.—Yes. Though I would not think him guilty of doing anything wrong, yet I would ask him to cease doing in future.

President.—Have you any evidence as to how these foreign companies are operating in Burma?

Mr. Gandhi.—I have no particular knowledge about Burma, but I can give you a general idea about the existence of the trust. I can refer you to your opening speech. Mr. Troup also in his report has mentioned something about this trust.

President.—It is a very ancient document.

Mr. Gandhi.—The Trust is more ancient than that.

Dr. Matthai.—His information is from a German, I understand.

Mr. Gandhi.—It is from the American Consul at Kobe. In paragraph 5 Mr. Troup has mentioned how the Trust is operating in Japan.

President.—I don't express any opinion. I want to know whether you have any evidence as to how the Trust has been operating in Burma.

Mr. Gandhi.—What may be called legal evidence, I have none; but I have circumstantial evidence.

President.—Circumstantial evidence is very often very legal.

Mr. Gandhi.—This is an extract from the speech of Mr. Ivan Kreuger, Managing Director of the Swedish Match Company, at the meeting of the shareholders held in London on 15th May, 1925.

President.—Where did you get it from?

Mr. Gandhi.—From one of the London papers. May I read that? "It is easy to understand, however, that if the Swedish match industry is to retain its leading position, it cannot rely only on the Swedish factories, and for this reason the Swedish Match Company decided a few years ago to go in for a programme of taking interest in match factories abroad on a very large scale. We have now in operation two newly built factories in India, one in Bombay and one in Calcutta, and we are building two new ones, one in Karachi and one in Madras, and we have acquired two established match factories in Colombo and Rangoon. It is not our intention to try to monopolise the Indian match trade, and we have decided to seek the co-operation of prominent Indians in our Indian undertakings." We have also got an extract from an article which appeared in the "New Empire."

President.—What New Empire is this?

Mr. Gandhi.—It is a Calcutta evening paper.

President.—Is that recent?

Mr. Gandhi.—Yes.

President.—Have you got any more information regarding the Swedish Trust?

Mr. Gandhi.—This is all.

President.—What about the Japanese? Have you got any evidence as regards the operation of the Japanese manufacturers in Burma?

Mr. Gandhi.—I have no evidence to give you, but I was told when this subject was discussed that the Japanese exporters invoiced at less price than their home price by about a difference of 4 yen and in support of that statement, they produced some invoices and some letters, but I have no proof with me.

President.—We are trying to obtain this information from the importers.

Mr. Mathias.—Your objection to the alleged trust in the match manufacture I understand extends only in so far as the trust threatens the existence of the Indian manufacturers, is that not so?

Mr. Gandhi.—Yes.

Mr. Mathias.—What I mean is this that in some countries there are selling arrangements; for instance the various factories in the country may well retain their independence and come to some arrangements by which all their products are pooled and sold. Supposing any such system as that is introduced here, would your objection still hold good?

Mr. Gandhi.—I would request the Government's intervention. I would oppose this trust.

Mr. Mathias.—Then also you would ask for anti-trust legislation.

Mr. Gandhi.—Yes.

President.—Have you got any other proposals?

Mr. Gandhi.—I have several.

President.—What are they?

Mr. Gandhi.—I have to draw your attention to the fact that several provincial Governments, Bihar and Orissa, Bengal, Madras and United Provinces have taken some steps for the development of the match industry.

President.—We have written to all the local Governments and have received their replies so that it is not necessary for you to give evidence on that point.

Dr. Matthai.—What exactly is the kind of information you have?

Mr. Gandhi.—Only extracts from the reports of the Departments of Industries in those provinces. I would like to say in this connection that the Burma Government has up till now taken no steps in this direction. I would wish that all Governments should take some steps.

President.—Your information about the Government of Burma is not accurate. The Government of Burma had not done very much until recently, but they have made considerable progress towards the development of the Match Industry.

Mr. Gandhi.—I am glad they have taken steps, because the Burma forests are very large.

Dr. Matthai.—What do you wish the Burma Government to do?

Mr. Gandhi.—I want that royalty should be fixed at a reasonable figure. At present it varies from Rs. 4 to Rs. 12-8-0. I would put it at Rs. 6 or so.

President.—What is the next thing?

Mr. Gandhi.—Transport facilities should be afforded to the factories. Another thing I want to draw your attention to is about the railway freight.

President.—There is another committee functioning just now as regards railway rates and it would be better for you to approach that committee.

Mr. Gandhi.—We strongly hold that considerations of State revenue should not have precedence over those of the interests of the industry.

President.—You have mentioned that in your main representation.

Mr. Gandhi.—The term of the present protection should be fixed for at least 5 years in the first instance. After that period, an enquiry may be undertaken and the rate of duty may be revised in the light of circumstances then existing. But protection must continue till the industry is fully developed and is able to meet the total requirements of the country.

President.—That is the policy of the Government. If they want an industry to be protected, they fix a period.

THE SWEDISH MATCH COMPANY.

Evidence of Mr. S. SCHELE, recorded at Calcutta on Wednesday, the 13th April, 1927.

Introductory.

President.—You are the General Manager for India, Burma and Ceylon of the Swedish Match Company.

Mr. Schele.—Yes.

President.—We are very much indebted to you for meeting our arrangements at considerable inconvenience to yourself. You postponed your visit to Europe for us for a fortnight and you also supplied us with fairly exhaustive replies on the points dealt with in the questionnaire. But I would like to explain to you one or two points, for your information as well as to guide you in this enquiry to some extent. Of course you say that you have got no case to state.

Mr. Schele.—Yes, we have no case to state.

President.—Therefore you wish your evidence to be taken in camera. It is not for me to advise you as to what course you should adopt because you are the best judge of that but I think I would like to point out to you that you are very much interested in this enquiry. After I have stated the points to you if you still wish to be heard in camera—of course I have no power to compel you, nor have I any desire to compel you to give your evidence in public—it is for you entirely to say. In Burma I explained at some length the scope of the enquiry.

Mr. Schele.—I have read your speech.

President.—Mr. Sundgren was present there and I thought you must have read it.

Mr. Schele.—I have.

President.—There are one or two things there which I am sure will interest you. There is the statement by almost every applicant that the Swedish Company is operating here as a trust and they contend that it would be to the prejudice of the country to allow this company to operate as a trust, if it was established that it was operating as a trust. Those are the kinds of allegations made. Therefore it is our duty to enquire into that, is not that so?

Mr. Schele.—Yes.

President.—Unless we give you an opportunity of either proving that the trust does not exist or that it will not operate to the prejudice of the country our recommendations should be defective. In any case if you had not had that opportunity, it would be a hardship. Supposing we came to the conclusion that there was this trust and that we were of the opinion that that trust should not be allowed to operate to the prejudice of the country, then you sat quiet and said nothing it would be very difficult for us to ignore this body of evidence which would be led against you and to say that it had not been established, so that it does seem to me that in the interests of your own company, of which as I say you are the sole judge, you should come forward and assist the Board in investigating this aspect of the case.

Mr. Schele.—Yes.

President.—How can we do it if you insist upon evidence being given in camera?

Mr. Schele.—My request to be heard in camera refers to the present moment.

President.—When you say that you have not a case to state, I am suggesting to you that you have a case which you may state.

Mr. Schele.—At the same time as we have no objection to the Tariff Board's using for themselves what I am going to say, we don't wish the information to be published at the present moment. I think that when I return from leave and these investigations continue, I shall probably be in a position to allow you to publish everything.

President.—We are very grateful to you for that. I see that you have no objection to placing all the facts before us. This is a public enquiry. It arises in this way. These allegations have been made against the trust publicly and therefore they should be met by the company publicly and unless the company does that, the investigation is incomplete. If you tell me *in camera* what these people say is not right—I am just giving you an example—we have got no means of deciding whether what you say is right or whether what they say is right. But if the statement is made in public, all people can read in the papers that the Swedish Company has made such and such a statement and if they don't agree with that, they can come and give evidence before us if they choose.

Mr. Schele.—We can probably arrange to have the whole thing published later on. At present the difficulty lies in drawing a line between my evidence in public and my evidence *in camera*. Certain points may arise unexpectedly. For this reason I think that it will be much easier, after seeing the report of the proceedings, to say whether and to what extent the proceedings may be published.

President.—The point is this that as a general principle I hope you will be able to agree that what is publicly alleged against the Company should be publicly met by the Company.

Mr. Schele.—Yes, but you know sometimes when allegations are made which are altogether unfounded, you don't even go to the trouble of contradicting them.

President.—You run a great risk in that case.

Mr. Schele.—We don't think we do because we have a very clear record. We feel you will be able to prove this without approaching us for information.

President.—I am just trying to point out that we have got to weigh the evidence on both sides.

Mr. Schele.—I fully appreciate your views and whatever can be done later, we shall certainly do it. But at present I should very much appreciate if you would agree to my request.

President.—At present I have no objection to the evidence being taken *in camera* and to treat it as confidential. But if subsequently we are not able to use that evidence, then more or less your side of the case may go by default. We cannot base any argument on evidence taken *in camera* and we may have to say that these allegations have been made and as far as we can see they must stand because there is no evidence to the contrary.

Mr. Schele.—I fully appreciate your views.

President.—There is another point on which I think the Company may be interested and on which evidence should be given in public. A proposal has been made by one or two applicants that an excise should be levied not on all Indian matches but on matches manufactured by foreign companies. That of course we have to consider. Supposing we are to investigate that, you will have naturally something to say about it, I presume.

Mr. Schele.—I don't think that we have much to say on that point.

President.—It is for you to consider whether you are sufficiently interested in that question or not. Supposing we came to the conclusion that this company is in substance financed by foreign capital and that a special excise duty should be levied on it; if you say that you are not interested in that point, I have nothing to say.

Mr. Schele.—I don't say I am not interested, but I think the facts will rather speak for themselves.

President.—Well, facts do not very often speak for themselves unless they are explained. When you go to your head office, you have got to explain to them the points that are put to you now. It is for that reason that I am rather going out of my way to make some suggestions to you, so that you may be able to persuade the authorities at home to agree to the proceedings being published.

Mr. Schele.—Yes.

President.—We shall now proceed on the assumption that some time later you may be able to allow us to publish your evidence.

Mr. Schele.—Yes.

The process of manufacture.

President.—There are certain papers which I have not been able to study sufficiently to examine you on all the questions in the introductory part. So, I propose to take them up at a later stage. At present I won't ask you any questions connected with answers to questions Nos. 1, 2 and 4. In answer to question 3 you say that you carry out the whole process of manufacture.

Mr. Schele.—Yes.

President.—That is to say, you manufacture from the log stage right up to the finished matches.

Mr. Schele.—Yes.

Dr. Matthai.—Is that the case in every one of your factories?

Mr. Schele.—Yes.

Dr. Matthai.—Have you ever considered the question of having separate factories for separate processes in connection with any of your factories?

Mr. Schele.—Yes.

Dr. Matthai.—And you have definitely turned it down.

Mr. Schele.—We have found that it does not pay.

President.—I think that this point requires a little more investigation. At present I take it that you have not found it practicable to separate the processes in India because I take it that you are using chiefly imported wood on the Bombay side.

Mr. Schele.—Yes, for splints and exclusively Indian wood for boxes.

President.—For veneers you use exclusively Indian wood.

Mr. Schele.—Yes.

President.—On the Bombay side I take it that you have not found any very suitable wood for splints.

Mr. Schele.—No.

President.—That is one of your reasons for importing wood.

Mr. Schele.—Exactly.

President.—As far as we can see at present, that does not apply in its entirety to Burma.

Mr. Schele.—No.

President.—In Burma they have found wood which is more suitable than any that you have found on the Bombay side.

Mr. Schele.—Not in our opinion.

President.—What I mean is that in Burma they have found wood which is more suitable for splints in many varieties than you have so far found here.

Mr. Schele.—I should say equal to what we have found in Bombay but inferior to what we have found in Calcutta.

President.—That is just the point. What is the principal kind of wood that you have found in Bombay?

Mr. Schele.—Salai. That is the only one we have used with success.

President.—Have you got any specimens of the splints here?

Mr. Schele.—No. We have made a certain quantity of matches from it.

Mr. Mathias.—Is salai better than genwa?

Mr. Schele.—No. Genwa is better than salai, because it is whiter.

Mr. Mathias.—Have you found it better than sawbya or maulettanshe?

Mr. Schele.—From an economic point of view, that is to say it is more economical in the cost of production.

Dr. Matthai.—Is it largely a question of wastage?

Mr. Schele.—Yes.

President.—That is to say, you get a better outturn?

Mr. Schele.—In Calcutta than we do in Burma.

President.—In Burma I think the figure given was 33 c.ft. for 100 gross boxes—veneer and splints. How much would this salai wood give?

Mr. Schele.—I think our figures in Burma are higher than those given by others—minimum 20 c.ft. per 50 gross of matches or 40 c.ft. for 100 gross.

President.—They said they got 156 gross from 1 ton and another 25 c.ft. for the cases, so that it appears that they have attained better practice than you have in Burma.

Mr. Schele.—Provided their figures are correct.

President.—Supposing you realized these figures would you still consider that the Indian woods are better?

Mr. Schele.—In that case I would say it is very much the same.

President.—That brings us to this point about the separation of processes. Supposing you took any particular part of India or Burma where you have got suitable wood and you get it by plantation or in some other way by which you can get your wood from one big source. Then, would you still suggest that it would not be practicable to manufacture your splints near those areas to be sent to other parts of India for finishing?

Mr. Schele.—Our calculations so far, not only in this country but in other parts of the world, have gone to prove that it is more economical to have the whole process carried out in one place.

Mr. Mathias.—It is a question very largely of supervision, is it not?

Mr. Schele.—Yes, you have to maintain two establishments.

Mr. Mathias.—You have to have a double number of engineers, skilled labour mechanics and so on, so that it is mainly a question of superior staff and overhead charges?

Mr. Schele.—Yes, but further also packing and unpacking and arranging the splints again. If you have one match factory the whole process is going on continuously. If you have a separate splint factory it means that you have to level the splints, pack them in cases, then you have to unpack them on arrival at the factory and level them again for the frame-filling operation.

Mr. Mathias.—In the main it is a question of increase of superior staff which is necessitated by having two separate factories.

Mr. Schele.—Yes.

Dr. Matthai.—Does the difficulty of getting labour come in?

Mr. Schele.—Yes, in India particularly if the splint factory is situated in the forest area.

President.—I just want to understand what it involves apart from what you call overhead. First of all you must have a manager there, an office and that sort of thing, but apart from that I want to know what additional processes or what additional expenditure it will involve to have a splint factory near the forest. What processes can you carry on in the forests? Can you do merely the chopping or can you do impregnating and other things as well?

Mr. Schele.—It is very difficult to say unless you know where exactly it is. I suppose one could have a try at the other processes as well.

President.—Up to what stage can you carry on the manufacture in close proximity to the forests? Let me give you a concrete instance. Take Burma. As you know Messrs. Adamjee Hajeer Dawood and Company have got a reserve. It is about 50 to 60 miles from Rangoon. Supposing you were to manufacture splints there: to what stage can you carry on the manufacture?

Mr. Schele.—First of all it would be necessary to peel the logs and chop the veneers into splints. Further, the splints would have to be dried as well because otherwise they would get mouldy if they were packed moist in the case. Finally, they would have to be levelled and then packed into cases.

President.—Would they be ordinary cases or special packing cases?

Mr. Schele.—Any kind of case would do.

President.—Would they require any lining?

Mr. Schele.—In the monsoon they would require lining.

President.—Then you have got to unpack these?

Mr. Schele.—Yes, and then level them again in order to put them into the frame filler.

Mr. Mathias.—In the case of a very small company which relied on hand machinery the question of superior mechanical labour would not come in and for such a company it may possibly be an economical proposition to manufacture splints in the forests.

Mr. Schele.—When you come to the case of a cottage industry it may be difficult for it to carry even the overhead charges because *even* one man in the forest would mean a higher overhead charge.

Mr. Mathias.—Would it not be economical for a big company which depended entirely on machinery to have such a splint factory?

Mr. Schele.—No. They would have to maintain two establishments.

President.—How long will the splints keep before they can be finished?

Mr. Schele.—I should say once they have been properly dried they would keep a year, but when I say that, I am thinking of aspen. As regards Indian wood they would become dark if kept long.

President.—Supposing we did not attach much importance to the colour?

Mr. Schele.—Then they last longer.

President.—It is rather an important point in this way: supposing matches were to be made on a large scale in India out of Indian wood. There are parts of India where they cannot get wood economically but they might get splints made out of Indian wood elsewhere, so that if the splints could be kept for a reasonable period it does not seem to me to be a very difficult proposition.

Mr. Schele.—No. I don't think so except that in India it would be very difficult to get labour up in the forests. This is a question which we have considered carefully, and I am relating our experience.

President.—It does not require enormous labour.

Mr. Schele.—No.

President.—Your machinery in Bombay, I suppose, would be still more up-to-date than Messrs. Adamjee's?

Mr. Schele.—Yes.

President.—As far as I could see it did not require very much labour.

Mr. Schele.—Yes, but whatever labour you have you must be able to depend upon.

Mr. Mathias.—Do you find the labour employed by you averse to living in the jungle?

Mr. Schele.—We often find difficulty in keeping labour. Even in a place like Ambarnath because they want to live in the town. At Dhubri for instance we find that we cannot retain our labour.

President.—That arises in India wherever you employ local labour but it does not arise where you keep imported labour. In Burma we did not find much evidence to show that there was very much labour trouble. In Burma it is imported labour and the labour is very reliable, whereas in Bombay you have labour which comes to the town in the dry season and wants to go away to the fields in the monsoon. That does not happen in Burma where you have imported labour so that it is not such a serious question.

Dr. Matthai.—I find from your answers that only 10 per cent. of your labour at Ambarnath is local labour and the rest comes from outside.

Mr. Schele.—Yes.

Dr. Matthai.—So that supposing you had a factory planted somewhere near a forest area, a distance of a few hundred miles would make no difference to them?

Mr. Schele.—I have got labour figures here which are rather interesting. Out of a total labour force of 1,517, only 80 remained from 1924, 410 from 1925 and 665 from 1926 leaving a balance engaged in 1927. That is for Ambarnath. In Calcutta of a total 780, 61 remained from 1924, 196 from 1925, 333 from 1926 and 128 from 1927, and those are people whom we have trained at considerable expense and trouble and that is where we come in at a disadvantage. We train the people and then gradually they leave us.

President.—Up to the splint cutting part have you any objection to telling us what amount of labour you would require for, say, an output of 50 gross only up to that stage?

Mr. Schele.—I will let you know to-morrow.

President.—Take your Ambarnath factory. If the splints were made near the forest how much labour would you require, say, for 100 cases?

Mr. Schele.—I will let you have this information to-morrow.

Mr. Mathias.—You have read Mr. Troup's book and you know that he makes a recommendation that splints should be prepared actually in the forests near the site of matchwoods. Do you know of any factory in India which has followed that recommendation?

Mr. Schele.—I don't think anybody has done that.

Mr. Mathias.—Although the recommendations were made 15 years ago the experience of the match factories would appear to prove that it is not an economical proposition?

Mr. Schele.—Yes. As a matter of fact we promoted a Company in Burma in 1925 to manufacture splints in the jungles.

President.—Where did you start it?

Mr. Schele.—In Rangoon. We were going to manufacture splints in the jungle, but after we had gone carefully into the question on the basis of actual experience we found it would not pay.

President.—That point will not arise unless the supply of it was concentrated, that is to say unless you had a natural forest where you get the wood in very large quantities or you had a plantation. I am assuming that there is a plantation or that in very large quantities wood is available. In such a case I would like to understand what the difficulties would be in the way of manufacturing splints. You have mentioned these two, first it would add to the cost and second the difficulty about labour, but if very large quantities of labour were not required, then the difficulty is not very great.

Mr. Schele.—No.

President.—Then can you give me some idea of the additional cost that this would mean? Can you give me any information?

Mr. Schele.—I can go into it and let you know.

President.—How much would it cost?

Mr. Schele.—It depends on local conditions.

President.—Such as.

Mr. Schele.—How far away it is from a civilised part of the country.

President.—We have got to assume certain conditions. We will assume that the forest is more or less accessible and we will also assume that there is no unusual labour difficulty. I think those two things may be assumed.

Mr. Schele.—This is all really ancient history in match-making. If there were an advantage, the Swedish Match Company would obviously have splint factories on the other side of the Baltic instead of bringing the logs to Sweden.

President.—We have got to come to some decision.

Dr. Matthai.—At present what is the position in Sweden? Do you get your wood locally?

Mr. Schele.—Yes, both from Sweden and outside.

Dr. Matthai.—The bulk of it from outside.

Mr. Schele.—Finland and from the Baltic Provinces. What I said is based on practical experience. The Swedish Match Company would hardly do it if it paid better otherwise.

President.—Generally from your experience you definitely say that it is not an economic proposition to manufacture splints near the forests.

Mr. Schele.—No, it is not an economic proposition.

President.—It is better to carry out all the processes in one place.

Mr. Schele.—Yes, if at all possible.

Location of factories.

President.—Supposing we came to the conclusion that this sort of wood was available in Bombay and Burma and also in Calcutta, do you suggest that the manufacture of matches should be confined to these points where wood is available or would you suggest that factories may be established in other parts of India and wood may be sent from those three different places to other parts?

Mr. Schele.—Speaking generally, I think one should, if possible, try to combine a large market with vicinity of raw materials.

President.—That is to say you would have large factories in the vicinity of those places where there is wood available in large quantities.

Mr. Schele.—Yes.

President.—You distribute your matches from those centres rather than distribute the wood to different centres, is that what you mean?

Mr. Schele.—It is very difficult to say which point is the most important. It depends on the cost of distribution.

President.—I want your opinion as an expert about Indian conditions.

Mr. Schele.—I would say the vicinity of raw material is the most important.

President.—The principal raw material is wood.

Mr. Schele.—The match industries of Sweden and Japan are to a great extent founded on that fact. They are close to suitable wood, and that is a very important point.

President.—It means this that the manufacture of matches must be confined to few centres.

Mr. Schele.—I fully agree.

President.—And the rest of the country must be supplied from those centres with finished matches and not the wood, is that your idea?

Mr. Schele.—Quite so.

Organisation of the Swedish Match Company.

President.—In answer to question 4 you give the dates when you started manufacturing matches in India. I take it that these factories were started in India, because the duty on matches was raised.

Mr. Schele.—Yes, and we found that our competitors took advantage of that at once. We watched developments for some time, as we could not conceive that matters would be allowed to continue but when we saw our competitors take the trade away from us, we had no choice but to commence manufacturing in India as well.

Mr. Mathias.—When you refer to your competitors, do you mean the factories in Bombay which started importing splints and making matches?

Mr. Schele.—Yes, that was to a great extent supported by Japanese capital.

Mr. Mathias.—You started your factory on the same lines to start with.

Mr. Schele.—Yes, one factory.

Mr. Mathias.—Which was that?

Mr. Schele.—Ambarnath only with a production of 25 cases a day.

Mr. Mathias.—Afterwards when the duty was put on splints, you changed your procedure and utilised partly Indian wood and partly imported logs.

Mr. Schele.—Yes. Then we started to look round for Indian wood.

Mr. Mathias.—And thereafter you increased your factories.

Mr. Schele.—Yes.

Dr. Matthai.—Can you give me some idea of the position of the Western India Match Company? I am finding it a little difficult to follow. Are all these Companies independent of one another?

Mr. Schele.—Yes, they are.

Dr. Matthai.—Are they separate Companies?

Mr. Schele.—They are independent of one another, but they are under the same management.

Dr. Matthai.—The Western India Match Company, are they the managing agents for these other Companies.

Mr. Schele.—No.

Dr. Matthai.—The Assam Match Company has got its local directorate and the Burma Match Company has got its local directorate.

Mr. Schele.—Yes, but the management is concentrated in Bombay.

Dr. Matthai.—These local Directors have their powers restricted through the control of the Western India Match Company.

Mr. Schele.—In the ordinary way according to the Company law we have a Directors' meeting and the Managing Director cannot do more than what is endorsed by the Board of Directors.

Dr. Matthai.—You have not any more direct connection with the Western India Match Company than with other Companies.

Mr. Schele.—No. I am the Managing Director of Western India Match Company.

Dr. Matthai.—In that capacity you have a general control over all the Companies.

Mr. Schele.—I have only a general control over the Western India Match Company in that capacity.

Dr. Matthai.—Has the Western India Match Company a general control over all the rest?

Mr. Schele.—No.

Mr. Mathias.—May I ask you whether you contemplate closing down any of the factories specified here or adding any more?

Mr. Schele.—I don't think we are going to add any others. There is a small chance of closing down the Burma Match Company.

Dr. Matthai.—You have no proposals regarding Madras or Karachi.

Mr. Schele.—Our original idea was to establish factories near the main timber supplies, but afterwards we found on investigation that there was no suitable wood in those places.

Dr. Matthai.—Have you one in Ceylon?

Mr. Schele.—Yes, that is working with imported splints and veneers.

President.—What about Karachi?

Mr. Schele.—No timber is available there.

Mr. Mathias.—Do you contemplate starting a match factory in the Andamans?

Mr. Schele.—No. We were to a certain extent influenced by Mr. Troupe's book. For instance in a place like Rajahmundry I spent some time there to find out whether there were prospects of wood supplies and there was not the slightest chance of getting any supply at economical rates. Another place is Bareilly. We made investigations there and found that we could not obtain sufficient timber.

President.—I may point out to you that it would be just as well for you to consider whilst this enquiry is going on not to extend your operations too much, because it is obvious that if you did, it would make our task more difficult and your own position may not be sufficiently safeguarded.

Mr. Schele.—I fully appreciate that. It is rather a difficult position.

President.—If you get any more concessions for working the forests, while the enquiry is proceeding, that would rather embarrass the Board as well as you, would it not?

Mr. Schele.—Yes.

Dr. Matthai.—When you took over the Burma Match Company and the Mandalay Match Company, were they working concerns?

Mr. Schele.—The latter had been closed down but the former was working.

President.—As regards your answer to question No. 5, they are maximum capacities of the various factories. You have not yet attained that output.

Mr. Schele.—Yes, we have in Calcutta.

President.—In Calcutta you have reached 5,000 gross.

Mr. Schele.—Yes, and in Ambar Nath we expect to reach 8,500 gross in a couple of months' time.

President.—That is its maximum capacity.

Mr. Schele.—Yes.

President.—As regards Assam, is 1,250 gross the maximum capacity?

Mr. Schele.—I think we should be able to make 1,500 gross in Assam.

President.—What are you making now? I think you have given some figures.

Mr. Schele.—I don't think I have given that. We are making about 15 cases a day.

Mr. Mathias.—Is that in Assam?

Mr. Schele.—Yes.

President.—How many working days do you take in a year?

Mr. Schele.—300 days.

President.—Then the Burma Match Company you say you might close down.

Mr. Schele.—That is really an old concern. We have been considering whether it would prejudice our case if we closed it down under the present circumstances. It is not an economic proposition.

Mr. Mathias.—What case?

Mr. Schele.—I mean the Tariff Board's investigation,

President.—If you were to close it down on the ground that it was not an economic proposition, it is a very good ground. So far as we are concerned, we do not allow any concern which is not run on economic lines.

Dr. Matthai.—What was the trouble with these two factories that you closed down at Parel and Mandalay. As regards Mandalay the trouble I take it was wood supply.

Mr. Schele.—Yes, and the machinery was old. We installed some new machinery, but then the wood was unsatisfactory.

Dr. Matthai.—What about the Parel factory?

Mr. Schele.—It was a small unit. In Ambarnath we shall instead increase to 8,500 in about two months' time. Instead of having two establishments, we wanted to have one only.

President.—Can you tell me why you selected Ambarnath as the site? How many miles is it from Kalyan Station?

Mr. Schele.—About 3 miles.

President.—That is a railway station.

Mr. Schele.—It is on the Great Indian Peninsula line.

President.—Is it a new station?

Mr. Schele.—No, I don't think so.

President.—Is your factory close to the railway station?

Mr. Schele.—Yes.

President.—That was selected I suppose because the site would be cheaper.

Mr. Schele.—Yes. There was a lot of propaganda from the Bombay Development Department. They promised new industries all kinds of advantages. Once it appeared to be an unfavourable site but subsequently we have revised our opinion. We can retain our labour better there than if the factory was in a town.

President.—Kalyan is about 42 miles from Bombay. Ambarnath would be about 3 miles from Kalyan. So, your factory at Ambarnath would be about 45 miles from Bombay.

Mr. Schele.—Yes.

Mr. Mathias.—You say that to run a factory with small production is not economical. Does the same thing apply to the Mandalay Match factory?

Mr. Schele.—It applies to all factories. The reason why we started these small factories was that we wanted to be near the sources of wood supply.

Mr. Mathias.—Why I was asking you that question was this. Probably it would be more economical if you brought down the machinery from Mandalay to Rangoon and extended your Burma Match Works and kept them both running in one place.

Mr. Schele.—It is partly that. Instead of keeping two establishments we can do with one. But we did not actually move the machinery because we have already some difficulty in selling the output of the Rangoon factory.

Dr. Matthai.—Is your machinery at Parel old machinery?

Mr. Schele.—We had a set of Japanese machinery and we wanted to find out really what was most suitable for India—either Japanese machinery working on rather primitive methods or modern machinery.

Dr. Matthai.—Are the Japanese machines power-driven?

Mr. Schele.—They can be worked by power and hand combined.

President.—Does it add much to your comfort to be at Ambarnath? You have got to carry, if you are using imported wood, your wood from Bombay Docks to Ambarnath. That is one item. Then, you have got to carry your chemicals in the same way.

Mr. Schele.—Yes.

President.—And then you have to send your matches from there.

Mr. Schele.—Yes.

President.—You are on the G. I. P. line. If you are to book your matches direct from the G. I. P. line to Bombay, Baroda and Central India Railway, you would have the disadvantage of paying a higher freight because they go over two lines.

Mr. Schele.—In certain instances we pay higher rates.

President.—You have to pay a high rate on the 50 miles because it is a short run and as you go on to another line, you will have to begin by paying the higher rate, is not that so?

Mr. Schele.—We have been exempted from that.

President.—Supposing you book from Ambarnath to Surat, will they charge you for 45 miles plus 166 miles which is the distance?

Mr. Schele.—In the beginning it was cheaper to send goods from Bombay than from Ambarnath, but this was an untenable position. We approached the Railway who made the necessary adjustments. In the case of Ambarnath there really was not much choice. The Bombay Municipality did not grant any licenses for match factories within their limits; in fact they are averse to any new industry because they want factories to develop outside in order to provide more space for houses, etc., in Bombay proper.

Match sizes.

President.—As regards dimensions, the usual standard dimensions are half and full sizes.

Mr. Schele.—Yes.

President.—You don't make the three-fourths size.

Mr. Schele.—No, not in India.

President.—I take it that the three-quarter size is used chiefly in Burma.

Mr. Schele.—No, not in Burma. It is used chiefly in the Punjab. It is an old size. 15 years ago India had only this size. Now it has been pushed out by full and half sizes.

President.—In Europe the three-fourth size is more common.

Mr. Schele.—That is the most popular size.

President.—It is both narrower and longer.

Mr. Schele.—It is not longer and it is not so high. § is another size which is only sold in Burma and in the Federated Malaya States.

President.—The ordinary European standard size is the three-quarter size.

Mr. Schele.—Yes.

President.—The usual sizes in India are full and half sizes.

Mr. Schele.—Yes.

President.—In Burma and Malaya States § is the size that is generally used.

Mr. Schele.—That is only for imported matches. It is a size that will die cut. We have got some stock of that size in Burma at present which is difficult to dispose of.

Dr. Matthai.—What about the imported matches? Are they full and half sizes?

Mr. Schele.—In Burma only full size is being imported.

Dr. Matthai.—In India?

Mr. Schele.—Full, half and three-fourth sizes.

Dr. Matthai.—Which size would be typical of imported matches; half or full, in the Indian market?

Mr. Schele.—It depends entirely on the market. Calcutta takes full size. Burma also takes full size. But Bombay takes half size.

Dr. Matthai.—If you take the imports over the country as a whole?

Mr. Schele.—I can give you the right proportion between the different sizes—if I look into the statistics, but I estimate 60 per cent. half size, and 40 per cent. full size.

President.—In making our calculations as to costs and so on, would it be right to take for India the full size?

Mr. Schele.—You would have to take both sizes.

President.—How can we unless we know in what proportion they are manufactured and what the different costs are?

Mr. Schele.—I think I have given you the difference in costs calculated from our own experience. If you take the cost of half size as Rs. 100, then the cost in India of full size is Rs. 142—42 per cent. more. If you take the cost of full size as Rs. 100, the cost of half size is about Rs. 71.

President.—Do you keep your cost accounts in that way? I am asking you generally because so far we have not been able to get separate costs. We have been told by others that their costs are averaged.

Mr. Schele.—Yes, because first of all they don't keep accounts properly and secondly they make full size and half size in the same factory which, of course, is uneconomical.

President.—What do you do yourself?

Mr. Schele.—We only make one size in each factory.

President.—Is that so?

Mr. Schele.—Yes.

Dr. Matthai.—At Ambarnath, you make half size?

Mr. Schele.—Yes.

Mr. Mathias.—Why do you say that it is uneconomic to make more than one size in a factory?

Mr. Schele.—Because the whole process is getting mixed up. If you make several sizes in a factory it would cost you more.

President.—Have you got to keep two different sets of machines for two different sizes?

Mr. Schele.—Yes, you have to arrange them for the different sizes.

President.—It will require the fresh adjustment every time.

Mr. Schele.—Yes.

President.—That of course would mean delay.

Mr. Schele.—Yes. Apart from that, the whole manufacture is being mixed up.

President.—That may account for increased costs.

Mr. Schele.—Yes, every time.

Dr. Matthai.—At present in Calcutta you make full size and in Bombay you make half size.

Mr. Schele.—Yes.

President.—Do you get your Bombay matches in Calcutta for the half size?

Mr. Schele.—We ship them to Calcutta.

President.—Do you find it more economic to ship the half size matches from Bombay than to manufacture them here?

Mr. Schele.—Yes, at present.

President.—What do you make in Assam?

Mr. Schele.—In Assam we make half size. When the Assam Company gets going we propose to let that factory cater for the half size on this side of India because that would be more economical than to send from Bombay.

Mr. Mathias.—Do you sell your Indian made matches in the Calcutta City market?

Mr. Schele.—Yes, to a certain extent.

Mr. Mathias.—Since when?

Mr. Schele.—We started about a year ago.

President.—Supposing the country decided that there should not be this wastage in respect of size and that everybody should use only one size of matches, which would you recommend for India?

Mr. Schele.—That is a very difficult question.

President.—Which is most economical to manufacture, the three-quarter size—to split the difference between Bombay and Calcutta—or the half size or the full size?

Mr. Schele.—I don't think that it makes any difference as far as the cost of production goes.

President.—It does not make any difference.

Mr. Schele.—No. We obtain a higher price for the larger box.

President.—It means this that instead of one factory you would have three, if you are to manufacture three sizes.

Mr. Schele.—Yes, but you don't have to manufacture the three-fourth size.

President.—Two sets of factories might do for India, one for full size and another for half size.

Mr. Schele.—Yes. As half size is consumed entirely in the Bombay Presidency, the factory there is very conveniently situated from that point of view. At the same time as full size is consumed in Calcutta, Burma and Madras, the factory on this side of India is very conveniently situated. The factories in the Bombay Presidency are never called upon to make full size matches. It is only on this side that there is a mixed demand. In Burma there is no mixed demand. The demand there is only for full size.

President.—As regards output, you have given for three years. In practically three years' time you have reached your full output, more or less.

Mr. Schele.—Yes.

The Ambarnath factory.

President.—Take your Ambarnath factory. From the time you thought of having a factory in India, how long did it take you to build a factory and start manufacture?

Mr. Schele.—I should say one year.

President.—The Western India Match Company, Limited, was registered in 1923 and you started manufacturing in 1924.

Mr. Schele.—Yes.

President.—It took you one year.

Mr. Schele.—Yes. We could have done it much quicker if we had used corrugated sheds. But we did everything *pucca*.

President.—I must say that you have been unusually quick in getting it going within a year.

Mr. Mathias.—Is that from the time when you decided on having a factory in India?

Mr. Schele.—Yes.

President.—It is a pity that we did not have an opportunity of seeing it before examining you. Do you work 300 days in a year?

Mr. Schele.—Yes.

President.—As regards Sweden, do you consider that the vicinity of the principal raw materials, vicinity to important markets and abundant labour supply, are the three important factors?

Mr. Schele.—Yes.

President.—Would you not consider water supply too? Would you not keep your wood in water?

Mr. Schele.—We must have water too.

President.—How do you arrange for water at Ambarnath for instance?

Mr. Schele.—We don't keep our wood there in water, because it is not really necessary to keep wood in water.

Kind of wood used.

President.—You use chiefly imported wood at Ambarnath, do you?

Mr. Schele.—We use a fair quantity of Indian wood for boxes.

President.—For splints?

Mr. Schele.—We use chiefly imported wood.

Mr. Mathias.—If you don't keep the wood in water does it not deteriorate very quickly?

Mr. Schele.—If you keep Indian wood in water it gets worse.

Mr. Mathias.—So you don't recommend keeping Indian wood in water at all?

Mr. Schele.—No.

Mr. Mathias.—You think the best procedure is to have the wood straight from the forest and start to work at once?

Mr. Schele.—Yes. If you could do that it would be a tremendous advantage.

Dr. Matthai.—How much of your year's consumption have you got to keep in stock?

Mr. Schele.—Imported wood about three months to be on the safe side and Indian wood we use as soon as we get it. Last year we tried to keep it stored during the monsoon but were not successful and had to import the wood required for boxes.

Mr. Mathias.—You do not lay in any stock of Indian wood for the monsoon?

Mr. Schele.—No, because it would not last. We are trying this year to do it to a certain extent and we shall really know after the monsoon how it has succeeded.

President.—In your case the most important consideration is the vicinity of the market because you are using imported wood so far as splints are concerned and also importing all raw materials, chemicals and so on. Supposing there was no duty then the most important consideration would be wood, would it not?

Mr. Schele.—Yes.

President.—But because there is this duty, the most important consideration is the market.

Mr. Schele.—Market and labour when you come to the Indian wood of course.

President.—Do you find this Indian wood more economical for veneers than imported wood?

Mr. Schele.—That depends, of course, on the price that we have to pay.

President.—I understood you to say that you were using local wood for veneers?

Mr. Schele.—Yes.

President.—So that it is obviously cheaper to use Indian wood than to import your wood for veneer?

Mr. Schele.—If you use a Japanese wood called chinanoki which is cheaper than aspen it comes practically to the same cost.

President.—In Sweden do they use separate kind of wood for veneers?

Mr. Schele.—No, the same kind.

President.—Is it more economical to use the same kind of wood for both veneers and splints?

Mr. Schele.—That is so in Sweden.

President.—If you had to use Indian wood would you rather use the same kind of wood for splints and veneers or would you have different classes of wood for splints and veneers?

Mr. Schele.—I don't think there is any drawback in using different kinds so long as you can rely on the quality.

President.—Speaking of wood for veneers do you find any difficulty in using Indian wood?

Mr. Schele.—We do, but we have to do it all the same.

President.—Because aspen would be more costly?

Mr. Schele.—Yes.

Mr. Mathias.—How does aspen compare with Indian wood as regards outturn?

Mr. Schele.—You get more splints out of aspen than you get from Indian wood.

Essential qualities of a good splint.

President.—As regards quality, what do you consider the principal qualities of the most perfect Swedish match? First of all as regards splints I want to know what makes a good splint, I mean the stick?

Mr. Schele.—It must not break either in the process of manufacture or when you strike it. In India you will often find half the sticks in a match box broken.

President.—That would, of course, depend on the way one handled them.

Mr. Schele.—After all there must be a certain amount of handling which is the same everywhere.

President.—Then in striking it must not break, isn't that so?

Mr. Schele.—That is so.

President.—So long as it possesses the minimum strength that is required for lighting, if it has not got the extra strength of the aspen, does it really matter? For example, see the matches which Messrs. Adamjee Hajeer Dawood and Company manufactured (specimens shown).

Mr. Schele.—I must say that I have never in my experience in India seen such fine matches as you have now put on the table.

President.—We have seen these during the process of manufacture. What I want to know is, so long as the matches do not break in lighting you do not consider them inferior?

Mr. Schele.—I don't know why I should. They are very nice matches.

President.—What it comes to is, first strength in manufacture and secondly strength in striking. Now, if the output from Burma woods is, say, about 1/3 of a ton for 100 gross boxes, that does not suggest very great weakness in the matches, does it?

Mr. Schele.—Unless broken matches are used to fill up the boxes.

President.—But supposing they do not use broken matches for filling the boxes?

Mr. Schele.—I would not say that the weakness came in so much there, but other considerations may come in.

President.—Quite so, but if you have got yield in that percentage it means the wood is not too weak to stand the process of manufacture and it will be reasonably economical if you got that output.

Mr. Schele.—Provided the matches are first class and there are no broken sticks.

President.—It is only an indirect way of finding out whether they are of reasonable strength because it would be very largely determined by the output. That is as regards the strength of the sticks. The other point of which much has been made is the colour. That determines the quality also.

Mr. Mathias.—Genwa provides the best quality of Indian manufacture.

Mr. Schele.—Yes.

Mr. Mathias.—It is not even as good as letpan.

Mr. Schele.—This is not a fair specimen of letpan (sample shown). I am most emphatic about it. We have made splints exclusively from letpan at Mandalay and we have tried our best to get good matches.

President.—Leave that out for the moment. But maulettanshe is not so very bad.

Mr. Schele.—No.

President.—Nor is the sawbya.

Mr. Schele.—Sawbya is still whiter.

President.—But maulettanshe is supposed to be better.

Mr. Schele.—We think that sawbya is better from the selling point of view. We can sell matches made from sawbya more easily.

President.—These tiger matches are undoubtedly whiter, but from the selling point of view you find that some customers attach a good deal of importance to colour.

Mr. Schele.—Nearly all customers seem to do that, because it looks nicer.

President.—No doubt it looks nice. Does it add to the lighting quality?

Mr. Schele.—No, not the colour.

President.—Colour does not add anything to the lighting quality. It is purely a matter of taste.

Mr. Schele.—Absolutely.

President.—Taste is a matter of money and circumstances chiefly.

Mr. Schele.—Quite.

President.—In what other respects do you suggest that the Indian match is inferior?

Mr. Schele.—When we are talking of splints, you will find that paraffin doesn't soak properly in some Indian wood, so that the stick doesn't catch the head properly and the head falls off.

Dr. Matthai.—Does it depend upon the paraffin it contains? I thought it has something to do with the glue in it.

Mr. Schele.—No.

President.—Do you consider that sawbya is subject to the same defect?

Mr. Schele.—It is, but not to the same extent.

President.—Supposing all matches in India were made of the same quality as the samples here, would you consider them inferior?

Mr. Schele.—No. In the case of Indian matches, you will further find that the inside box is not quite good.

President.—The breaking of the inner box, do you assign that to the inferior wood or to the defective manufacture?

Mr. Schele.—It is due to defective manufacture and inferior wood.

President.—There again we are just now considering whether good matches can be manufactured in the country or not by training labour, by having an up-to-date machinery and so on. I am suggesting to you that if matches of the class just now shown could be manufactured, they would be considered reasonably good.

Mr. Schele.—Yes.

Mr. Mathias.—Would they be as good as imported matches?

Mr. Schele.—I would not say that.

President.—Supposing you didn't attach any importance to appearance, whiteness or anything like that, would you consider these matches as good as the foreign matches in that case?

Mr. Schele.—There are other things. In the case of the Indian box you will find that the striking surface is rough, because the wood on which the paper is pasted is not smooth.

President.—We will deal with that when we come to veneer. Apart from the question of taste and appearance, is there really much difference in it?

Mr. Schele.—Then, of course, there is another very important question and that is the monsoon. I don't think you will find that those matches give satisfaction during the monsoon.

President.—We have got to test them. We will get a few boxes and see.

Mr. Schele.—You all know during the war that Japanese matches could not strike during the monsoon.

President.—Is it due to wood or due to defective manufacture?

Mr. Schele.—It is due to composition *plus* paraffining, because if the paraffin doesn't soak in well, you don't get the immediate connection between the flame and the wood which you require to get the fire.

President.—I am speaking merely from recollection. I think Adamjee's chemist told us that in this respect these classes of wood were superior to the aspen so far as taking in the paraffin was concerned. Anyhow that was his opinion.

Dr. Matthai.—The absorbing of paraffin does not depend on the quality of wood?

Mr. Schele.—Depends on the texture of the wood. It is like blotting paper.

Dr. Matthai.—Is the wood more porous?

Mr. Schele.—Yes.

Dr. Matthai.—What are the woods you use in Bombay for splints principally?

Mr. Schele.—Salai.

Dr. Matthai.—How does that compare with sawbya in respect of absorbing power?

Mr. Schele.—Just about the same.

Dr. Matthai.—Is there any kind of Indian wood that is distinctly favourable in that respect?

Mr. Schele.—No.

Mr. Mathias.—Does salai compare favourably with sawbya matches in colour and so on?

Mr. Schele.—Salai is darker than sawbya. The difficulty is to get sawbya of the proper quality in Burma. You may get 10 tons for a season, but if you want 500 tons a year, it would be much darker.

President.—The point is in this enquiry we have got first of all to find out what are the classes of wood which grow in India and which can be grown in India in larger quantities. As an expert I am asking you whether these classes of wood would lend themselves easily to the manufacture of good matches.

Mr. Schele.—I think if you get this kind of wood (sample boxes shown) and have an assurance that the quality is even irrespective of the quantity you take, I don't see why it should not be used.

President.—It is a pity you were not in Burma when we examined the Forest Officers on these points. We should be very glad when this evidence is printed, if you would kindly go through it and give us your expert opinion at some later stage. It would be very valuable to us. There we have taken a good deal of evidence on those points and we want to know whether you would agree with what they have stated.

Mr. Schele.—I shall do so.

President.—We were talking of the quality of sticks when we adjourned for lunch.

Mr. Schele.—Yes.

Wood for veneers.

President.—I think that you wanted to say something about the defects of the wood for veneers.

- Mr. Schele.*—I don't think that we touched the composition.
- President.*—No. I am not talking of the composition now. I am talking of the wood entirely. Are there any special defect about veneers?
- Mr. Schele.*—Do you mean veneers for making boxes? For boxes we use various kinds.
- President.*—Let us take Sawbya, Maulettanshe, Letpan and Gwe.
- Dr. Matthai.*—At present you don't use any imported wood at Ambarnath?
- Mr. Schele.*—No. We did last year.
- President.*—Are there any special defects in the Indian wood as regards veneers?
- Mr. Schele.*—The boxes break easily in the edges. Formerly we used Letpan in Burma but for this reason we have now gone over to Maulettanshe and Sawbya for boxes.
- Mr. Mathias.*—What harm does that do?
- Mr. Schele.*—It spoils the appearance.
- Dr. Matthai.*—Do you mean that it breaks when you use it or when you make it?
- Mr. Schele.*—The edge of the box breaks when it is being made. In the box-making machine, the whole thing breaks when it is going round. I dare say you saw that in our Burma factory.
- President.*—Sawbya does not seem to be very bad.
- Mr. Schele.*—It is much better. It is chiefly letpan that causes trouble.
- President.*—Letpan is the principal wood in this part of India.
- Mr. Schele.*—Again we find that letpan is quite different from the Bombax that we have in Bombay. Bombax in Bombay is much easier to work than Bombax in Burma. Then again, we get quite a different Bombax in Assam.
- Mr. Mathias.*—Don't you get any variation in the Aspen?
- Mr. Schele.*—Aspen is always the same.
- President.*—What about pine? Is it good for veneers?
- Mr. Schele.*—It is not good for veneers.
- President.*—There are considerable quantities of pine in Burma.
- Mr. Schele.*—Yes, there are still more in Sweden.
- President.*—Do you use it for paper and other things?
- Mr. Schele.*—We do. It would be cheaper than Aspen.
- Mr. Mathias.*—Do you find that the consumers in Sweden are particular in regard to such matters as colour, brittleness of boxes and so on?
- Mr. Schele.*—The brittleness of boxes does not affect the consumer so much as it affects the manufacturer.
- President.*—The waste occurs chiefly in the veneer.
- Mr. Schele.*—Yes. Sometimes after you have put the paper on, the whole lot breaks. Then again, you get broken fibre and when you paste the paper on it, you get a rough surface which causes friction, and consequently the striking surface becomes less durable.
- Mr. Mathias.*—Actually the striking surface lasts sufficiently long till all the sticks in a box are used.
- Mr. Schele.*—It ought to, but it wears off quickly.
- Dr. Matthai.*—You will admit that as far as box veneer is concerned, the drawbacks of Indian wood are not by any means so serious as in the case of splints.
- Mr. Schele.*—I would put it the other way. One has really to be more particular with veneers for box-making than with veneers for splints.
- Dr. Matthai.*—The fact that at present you are not using any imported wood for box veneers in your biggest factory at Ambarnath seems to me to prove that the defects are not by any means great.

Mr. Schele.—Why we don't use it for splints is the colour and to a certain extent the paraffining defect. As I pointed out to you just now, one has to be still more careful about box-making.

Dr. Matthai.—Judging by your Indian experience as far as Ambarnath factory is concerned the drawbacks of Indian wood may be disregarded. That is what you have done.

Mr. Schele.—They are disregarded to such an extent only that it is cheaper to use Indian wood.

Dr. Matthai.—It does not affect your market apparently.

Mr. Schele.—No. But we have to select the veneers very carefully before we use them on the machine. We have a special staff to select the veneers.

President.—The point is, as Dr. Matthai has pointed out just now, that you have found the Indian wood suitable for marketable purposes.

Mr. Schele.—Yes, from the market point of view.

Match Composition.

President.—As regards the composition, what are the properties of good composition as regards striking?

Mr. Schele.—First of all they must strike under all climatic conditions and secondly they must not be too hot, that is to say, ignite very easily because then there is the risk of self-ignition. Neither must it be too slow because then you won't be able to light at all. They must not flare up like fireworks.

President.—They must not also glow.

Mr. Schele.—Quite. If they do, the heads may fall down and cause fire.

President.—These may happen anywhere where the manufacture is imperfect. Why should the Indian matches be more guilty of these defects?

Mr. Schele.—They are due to climatic conditions when making the matches?

President.—They could be rectified by chemicals very largely.

Mr. Schele.—We have done it to a certain extent but we have not succeeded altogether.

President.—In course of time you would be able to understand the climate better.

Mr. Schele.—I hope so.

President.—Then, you may be able to produce better results. That is a matter of pure experience. There is nothing impossible in making your formula in such a way that you can make as good matches here as you make in Sweden.

Mr. Schele.—The difficulty is that you have constant changes here. It is chiefly a question of humidity. You have one humidity in the morning, one at noon and another in the evening.

President.—You have that in England too.

Mr. Schele.—Not so much. If you have a day of high humidity in England, it will at least last the whole day.

President.—Surely that would not affect the manufacture.

Mr. Schele.—Oh, yes, it would.

President.—In that case you can regulate the atmosphere of the factory if it comes to that. It is not very difficult. In the textile and other industries, they have been able to adopt devices to get over the difficulty.

Mr. Schele.—It might be done, but that is a big thing. Take our Dhubri factory which is made of corrugated sheets. I don't see how one could possibly keep the factory away from the influence of outside atmosphere.

President.—That is perfectly true. You built it like that because you thought it might do.

Mr. Schele.—It is a matter which can be investigated further.

President.—It is a matter which calls for research.

Mr. Schele.—Yes.

Dr. Matthai.—As to the difference between the sort of composition you get in the imported matches and the Indian made matches. Is it a question of proportion or is it a question of the quality of chemicals used?

Mr. Schele.—I should say we obtain the same quality of chemicals, also the same formula as they have at home.

Mr. Mathias.—Do you work the same formula?

Mr. Schele.—Yes, with some slight alterations.

Mr. Mathias.—Do you claim that in the case of your imported matches the heads are decidedly better in their operation than those of Indian matches made by you.

Mr. Schele.—They are.

Mr. Mathias.—Exactly in what respects?

Mr. Schele.—They are more even and stand the humidity better.

Mr. Mathias.—Do not the Indian matches light as well?

Mr. Schele.—They do but not so well as Swedish matches.

Dr. Matthai.—As far as you are concerned, you started with the formulæ employed by factories in Sweden and you are gradually experimenting with a view to adapting them to climatic conditions in India.

Mr. Schele.—We have in Sweden a test room where we prepare compositions for different climes and different countries, for instance, West Africa, India, South America, etc. We create the necessary different atmosphere. It is a kind of strong room where you get the required atmosphere.

President.—It is all a matter of research. It has got nothing to do with any natural disadvantage.

Mr. Schele.—I would say that we have arrived at a very fair and good formula for India. Our main trouble now is to be able to meet constant changes in the atmosphere.

President.—Let us hope that you will be able to meet them.

Mr. Schele.—Yes.

President.—That may take a little time.

Mr. Schele.—We are at it all the time. We are carrying on experiments continuously.

Dr. Matthai.—You have had only so far three years' experience of making these things. It is far too soon to say that the question of chemical composition is against the manufacture of matches in India.

Mr. Schele.—I quite agree.

Mr. Mathias.—For practical purposes the composition that you employ is satisfactory.

Mr. Schele.—Yes.

Mr. Mathias.—If any one wants to use your Indian made matches throughout the rains, he will be able to get a light from the majority of them, though perhaps one here and one there may fail.

Mr. Schele.—Yes, unless it is an exceptionally wet day.

The prejudice against Indian made matches.

Mr. Mathias.—Coming back to the question of prejudice, what do you attribute the prejudice to? For example, in France, the matches are a Government monopoly. Most of the sticks are dyed red, and apparently no objection has been taken to that. Why is the consumer in India so very particular about the colour of the splints? What is the reason for that?

Mr. Schele.—It is very difficult to say. I think that it is due to the conservatism of the people. In France, for instance, they have got sulphur matches. No other nation in Europe would look at those matches because they nearly suffocate you. Still if you go to the provinces, in France, you cannot obtain anything else. It must be due to conservatism.

Mr. Mathias.—Therefore it is a matter of education.

Mr. Schele.—I think it is.

Mr. Mathias.—Perhaps, a few years' education will make them use even coloured matches.

Mr. Schele.—If they cannot get anything else, they will have to use coloured matches.

President.—There is a question which you have not answered. The question is "Is there any prejudice apart from the question of quality against Indian matches either generally or in particular markets." In answer to that you say "No, on the contrary there is a preference for Indian matches in many markets due to the present low price." I think that you have misunderstood the question. If a thing is cheap a man buys it. But the point that we are trying to ascertain is how much more you can get for your Swedish matches than for Indian matches?

Mr. Schele.—That question is answered in my reply under 9 (c). I thought you meant "Is there any place where people said 'We won't buy Indian matches'?"

President.—If you offer him better looking matches, how much more is he prepared to pay for them?

Mr. Schele.—That depends on his purse.

President.—That is just the point—how far he is prepared to open his purse in order to buy a better looking match!

Mr. Schele.—I should say in India not very far because you are already facing a position where imported matches disappear more and more every year.

President.—But still to-day there is a certain class of consumer here who is buying your match in preference to the Indian match because it is better looking, and it burns better, isn't that so?

Mr. Schele.—Yes, but it is very difficult to give a definite statement on these matters because it must be guess work.

President.—You mean the question cannot be answered in that way. But the point is, to-day there is a certain class of consumers who prefer the Swedish matches to the Indian and that they would be prepared to pay more for the Swedish matches. Would it be right to say that to-day that preference would be represented by, say, 12 to 14 annas a gross?

Mr. Schele.—No.

President.—What would you assume it to be?

Mr. Schele.—That depends, as I have tried to answer in another question, on how much of the trade you want for India. There may be 1 per cent. of the population who are prepared to pay a high price, and say another 4 per cent. who come in if the price is slightly lower. Say, for arguments sake,—if you start from the beginning when local matches were first made—50 per cent. of the population were buying imported matches and 50 per cent. the Indian matches which then were about 1 anna below the price of imported, then the difference became 4 annas, and 60 per cent. of the population commenced to buy, and so on till perhaps the last man would only buy local instead of imported matches if the difference was very great indeed. But reasonably speaking I would say that apart from the small percentage of the population who would always buy imported matches, there is very little difference. We know that from practical experience. When we started at Ambarnath to sell our goods our price was Rs. 2-3-0 against about Rs. 2-4-0 for imported.

President.—It is only a very small percentage of the population who would buy the Swedish match at any reasonable price rather than buy Indian matches. Of course that population must exist everywhere, and you think that population may be perhaps 1 per cent. in India?

Mr. Schele.—Or more; that depends again on the price.

President.—But for practical purposes you find that more or less so far as the general consumer is concerned he would buy either the Indian or the Swedish match whichever is cheaper?

Mr. Schele.—Yes, he would buy the cheapest even if the difference is comparatively small.

Mr. Mathias.—Do you attribute the fact that a considerable percentage of the population still buy Swedish matches to the fact that Indian matches have not been brought to the notice of the consumer?

Mr. Schele.—I should think so to a certain extent because the low prices we have for Indian matches to-day have been in force hardly a year. But apart from that imported matches partly consist of sulphur matches while there has been no sulphur matches made in India until quite recently in Bombay and consequently those who wanted sulphur matches were confined to imported.

Dr. Matthai.—Are they non-safety?

Mr. Schele.—They will, strike anywhere.

Mr. Mathias.—You mean a considerable proportion of the imported matches are sulphur?

Mr. Schele.—Yes, but they are now being made in greater and greater quantities in the Bombay factories.

Mr. Mathias.—Could you give us any idea of the proportion of other matches as compared with sulphur matches?

Mr. Schele.—Out of an import of 11 million gross, 2 million gross were sulphur, and you will notice that even when the imports went down to 7 millions sulphur was still 2 millions.

President.—Are they cheaper?

Mr. Schele.—No. They are slightly more expensive. What happens is this. They are used by the agricultural population and when they go out in the morning to the fields they take a box of matches and distribute the sticks amongst the family members and they can strike them on a stone and light them whenever they want it. If there are 10 people in a family it would ordinarily mean 10 boxes but if they have got a sulphur match they can distribute one box among 10.

President.—What is the difference in price?

Mr. Schele.—Practically the same but if anything sulphurs are one penny higher at present per gross.

President.—Do you contemplate making sulphur matches?

Mr. Schele.—That depends on what will happen in India.

President.—If nothing happened?

Mr. Schele.—I don't think we will make them.

Mr. Mathias.—If the opposition factories in India commenced making sulphur matches, you will also make them, is that the position?

Mr. Schele.—I don't think so. There is not enough profit in match making them in India.

President.—Don't you think if no sulphur matches came here the consumption of other matches may go up?

Mr. Schele.—The agricultural population will then have a grievance against the authorities because they like the sulphur matches.

President.—In Europe are they being used more and more?

Mr. Schele.—Very little except in France.

President.—We were told in Burma that there was a lot of prejudice in favour of Swedish matches, that is to say, a man would pay 12 to 14 annas more simply because they were Swedish matches. Do you agree with that statement?

Mr. Schele.—Burma is a market that is totally different from the rest of India as I have had occasion to point out to my head office. The only reason I can find for that is that first of all there is the heavy monsoon in Burma

which makes the other matches more or less unreliable, and then again the population in general prefers a better quality and are prepared to pay the price for it.

President.—One of the reasons for the prejudice was that matches made in Burma in the earlier days were very bad.

Mr. Schele.—That I don't think has anything to do with it. It is not the match as such that they buy. If they introduce a new label and the matches are good people will buy them. Burma has, however, a definite preference for Swedish matches.

Mr. Mathias.—Has it anything to do with the universal habit of smoking in Burma?

Mr. Schele.—I don't think so. You will find that the Burmese is very particular. He can afford to pay for a better article and is prepared to do so.

Mr. Mathias.—You mean he has got more expensive tastes not only in matches but in other things?

Mr. Schele.—That is so.

Dr. Matthai.—If we are to accept your view that there is no prejudice against Indian matches then in how many years' time, at the present rate, would the imported matches be entirely displaced by Indian made matches with the present duty?

Mr. Schele.—That is a very big question to answer. The impression I have is that in three years time, if matters remain just as they are, the import will probably be down to one million and that will be concentrated chiefly on Burma. I think Burma will be the last market to give up the imported match.

President.—It must very largely depend on the view the Swedish Match Company takes of the position. To-day, for instance, you can get your matches at Re. 1 per gross c.i.f. landed and it is sold in the market at Rs. 2-8-0 per gross full size. If you find that getting Re. 1 c.i.f. price pays you better than getting Re. 1-8-0 for your Indian made matches then you would still continue to bring those matches into the country?

Mr. Schele.—But how could we bring them in if there was no demand.

President.—You are importers. If you find manufacturing locally pays you better, then you yourselves take possession of the Indian market and foreign matches will cease to come?

Mr. Schele.—You cannot take possession of a market; you have to follow what the public wants. If the public wants imported matches and we stop our export we won't stop any matches from coming in, because they will get Norwegian, Japanese, Finnish or Chinese matches. We have to follow the ordinary laws of trade.

President.—You yourselves are manufacturing now about 4 million gross; that represents a quarter of the total consumption of the country and you import about 4 millions.

Mr. Schele.—Yes.

President.—That makes another 25 per cent., that is half the total consumption of the country. Now, if you find that it pays you better to manufacture more matches here, then you would manufacture more matches in the country and the Swedish matches would cease to come in. It will very largely depend, therefore, on what profits you can make on Swedish matches or on the Indian matches, and whichever pays you better you do.

Mr. Schele.—That necessitates that we control the market. At present we don't sell all what we manufacture. We have got tremendous stocks in the country. We cannot sell and we do not decide the price to-day. I have got a stock of about 13,000 cases at Amarnath and I can't sell them because my price is higher than my competitors. I have got another 8,000 cases in Calcutta and 2,000 in Burma.

President.—Their complaint is, we do not know whether it is right or not, that you have been reducing your prices so they have been reducing theirs.

Mr. Schele.—It is very easy for the Tariff Board to find that it is not so. We can produce invoices.

Dr. Matthai.—Taking your figures and that of your Burma rivals, there is a difference of about a rupee between the price of imported and locally made matches. Supposing we adjust the tariff in such a way that the difference becomes Re. 1-8-0 and not Re. 1, would that hasten the disappearance of imported matches?

Mr. Schele.—Certainly.

Dr. Matthai.—You say without making any change in the tariff they would disappear in three years. If we did this, they might disappear almost immediately?

Mr. Schele.—Undoubtedly. Regarding that question about our stocks, it stands to reason that we have got heavy stocks because our prices are higher, considering that our sales organization is better than anybody else's.

Imported v. Indian made matches.

Dr. Matthai.—This difference that we have now got, As. 14 or Re. 1 you don't think that it really represents the difference in quality.

Mr. Schele.—No.

Dr. Matthai.—Very little as a matter of fact represents the difference in quality.

Mr. Schele.—Yes.

Dr. Matthai.—The whole of the difference is due to the fact that there are a large number of dealers in this country who have been dealing in imported matches and who might probably like to continue to deal in them. Their vested interests lie that way.

Mr. Schele.—I don't think so, because you find up-country dealers will have no interest at all. If they cannot obtain imported they sell Indian matches.

Dr. Matthai.—Therefore it is simply a question of India producing sufficient to displace the Swedish matches.

Mr. Schele.—At present India is producing too much.

Dr. Matthai.—In what way? Leaving out sulphur matches there is a market for 5 million gross of Swedish matches.

Mr. Schele.—Yes, but you must admit that you cannot alter the whole trade in one day.

Dr. Matthai.—You could not.

Mr. Schele.—The progress has been extraordinarily rapid if you take into consideration the few years in which it has been going on.

Dr. Matthai.—What do you mean by "India producing too much"?

Mr. Schele.—A vessel cannot hold more than a certain quantity of water. There is still in India some demand for Swedish matches. As Mr. Mathias said, perhaps, everybody doesn't know that there are cheap matches to be had. I think that there is a great deal of truth in that statement. If you go to certain parts of India, you will find that people are not aware of it on account of the deficiency in the selling organisations of local firms. At present 75 per cent. of the business is covered by Indian factories and only 25 per cent. is left for the Swedish and other matches. My contention is that this 75 per cent. of the trade is being covered or attempted to be covered to-day by a supply equal to 150 per cent. and the result is low rates for Indian matches.

Dr. Matthai.—Therefore as far as 4 or 5 million gross of Swedish matches are concerned, the imported matches and the corresponding locally-made matches work under the same sales organisation.

Mr. Schele.—Yes.

Dr. Matthai.—Therefore your argument does not really apply.

Mr. Schele.—It does, because we don't always offer local matches where we sell imported matches.

Dr. Matthai.—How do you draw the line?

Mr. Schele.—Where there is an active demand for imported matches, we only offer imported matches as far as it is possible. It has always been our idea that this protection was only a temporary feature and we were desirous of keeping our old trade marks going.

Dr. Matthai.—Where you find the people are prepared to pay a higher price, you don't sell your locally made matches.

Mr. Schele.—No, not until we are compelled to do so. Last year, for instance, in Madras there were no local matches whereas in Bombay 60 per cent. of the sales was local matches.

Mr. Mathias.—You would attribute this difference in price between the imported and the Indian matches really to the very severe competition which occurred in the last year or two between Indian made matches.

Mr. Schele.—I have to-day at Ambarnath 13,131 cases of the value of Rs. 8½ lakhs; Calcutta 8,110 cases at Rs. 7 lakhs, Assam 434 cases, Mandalay 938 cases, Rangoon, 1,297 cases. I am keeping these stocks, because I cannot get rid of them. That again shows that there is overproduction in the market.

Dr. Matthai.—You cannot get rid of them in the face of local competition.

Mr. Schele.—Yes.

Dr. Matthai.—What you mean by overproduction is that Indian factories don't have a sales organisation adequate for their production. The factories which produce large quantities have not the sales organisation to push their matches in those parts of the country where local matches are not sold now.

Mr. Schele.—They are doing so now.

Dr. Matthai.—The moment they succeed this overproduction will disappear.

Mr. Schele.—If you could cover the whole country, it would disappear provided, of course, that most people bought local instead of imported matches.

President.—As regards the Japanese matches and yours, do the Japanese matches compare more favourably with the Indian matches?

Mr. Schele.—Do you mean that they are not as good as ours?

President.—Yes.

Mr. Schele.—Undoubtedly.

President.—I see from the figures that what has been happening is that Japanese matches are disappearing from the market. That would be owing to the competition partly from you and partly from the Indian manufacturers or is it entirely due to your competition?

Mr. Schele.—I think it is due to competition from our import as well as competition from the Indian manufacturers combined with our locally made matches.

President.—The Japanese matches have practically gone out.

Mr. Schele.—Yes, they have.

Dr. Matthai.—Do the Japanese matches sell at the same price as the Indian made matches in parts of the country that you know?

Mr. Schele.—No. If these were bought at all, they could not be sold at the same price as the Indian made matches, because they have to pay the duty.

Dr. Matthai.—Japanese matches are not superior in quality to Indian matches.

Mr. Schele.—They are superior to Indian matches, but they are inferior to Swedish matches.

Dr. Matthai.—What is the difference between the Swedish import price and the Japanese import price?

Mr. Schele.—Before they disappeared the difference was about As. 2 per gross.

Mr. Mathias.—Japanese matches fetch Rs. 2-4-0 a gross.

Mr. Schele.—I don't think there is any sale at all of $\frac{1}{2}$ size. In Burma they are practically sold at the same rates as Swedish.

Wood for splints.

President.—As regards raw materials for splints, you use entirely foreign wood.

Mr. Schele.—Yes, except in Assam, and Burma and for second quality, Calcutta and Bombay. We have made a few thousand cases of second quality out of salai.

President.—Do you sell the second quality as yours?

Mr. Schele.—Yes, at a lower rate.

President.—You don't think that that spoils the name of the first quality matches.

Mr. Schele.—No, as long as we clearly indicate to the consumer that that is second quality.

President.—He only looks at the labels.

Mr. Schele.—We don't put a trade mark on it. Labels for second quality we make without the trade mark 'Wimco.'

President.—He doesn't understand anything about 'Wimco.'

Mr. Schele.—That trade mark is very widely known.

President.—Does he know that that is first quality?

Mr. Schele.—At any rate that is what we wish him to know.

Mr. Mathias.—Do you have good sales for second quality?

Mr. Schele.—Yes.

President.—Your man sells these matches both first and second quality and he says to the consumer "Look here, the second quality is Indian made match." In that way the reputation of the Indian matches goes down and the reputation of your matches goes up.

Dr. Matthai.—It clears the field for imported matches.

Mr. Schele.—Then again if he doesn't sell Panpatty or our second quality, he will sell some other quality similar to the box of Panpatty you have just shown.

President.—You can easily spoil the reputation of the Indian matches. I don't say that you are actually doing it.

President.—As regards Bombay what is the position of the industry there? Must it always depend upon imported wood?

Mr. Schele.—That depends on the success of these dark matches which we are now making.

President.—First of all do all factories use imported wood in Bombay?

Mr. Schele.—Yes, I think they all depend on imported wood for splints.

President.—Supposing the country says that the Indian Match Industry should be established, why should the country not say then that these people who use Indian wood should have preference over those who use imported wood. You can say "all right, matches will be manufactured in Calcutta or Burma and exported to Bombay." Is there any chance of Bombay being able to supply wood as good as these (samples shown) sawbya or maulettanshe?

Mr. Schele.—No, not as good as those in appearance, but it is more economical to work Bombay wood than Burma wood.

Mr. Mathias.—Have you an ample supply of salai?

Mr. Schele.—No.

Mr. Mathias.—Do you import it from the Central Provinces?

Mr. Schele.—The railway freight would be too much. We go as far as Kandwa.

Mr. Mathias.—You can get salai from there.

Mr. Schele.—We get it.

Mr. Mathias.—There is no difficulty as regards railway freight from there.

Mr. Schele.—It is fairly high. That is in the uneconomical section for freights.

Mr. Mathias.—So far as actual supplies are concerned, there is no difficulty in getting all your requirements.

Mr. Schele.—We get it from contractors.

Mr. Mathias.—There is no difficulty in getting supplies from contractors.

Mr. Schele.—Last year we had difficulties, before we raised our prices. You know that the price of wood has gone up also in Burma. We may have to pay more next year.

Dr. Matthai.—This division from which you are now extracting Indian wood, how far is it from your Ambarnath factory?

Mr. Schele.—40 to 60 miles.

Dr. Matthai.—How exactly do you convey the wood to your factory?

Mr. Schele.—By cart and rail.

Dr. Matthai.—I find that you are expecting about 2,000 tons of wood from the Kolaba area every year.

Mr. Schele.—That is again one of those optimistic reports.

Dr. Matthai.—It is an official estimate.

Mr. Schele.—Yes.

President.—I want to draw your attention to the point that so long as you use imported Swedish wood in Bombay which costs you above Rs. 115, you are at a great disadvantage compared to Burma for instance where they get wood at about Rs. 40, so that the industry does appear at first sight to be badly located from that point of view.

Mr. Schele.—Yes, if you can get suitable wood in sufficient quantities in Burma. But that is not the case.

President.—At present Mr. Adamjee Dawood does not use any imported wood.

Mr. Schels.—I know.

President.—His wood he gets at Rs. 40 delivered at the factory.

Mr. Schele.—Is that also his price from the Andamans?

President.—That is his average price. When you read his evidence you will find that that is so. Compared to him, let us put it that way, all the factories in Bombay are at a great disadvantage.

Mr. Schele.—Yes, but then the working conditions in Burma are more difficult than in Bombay or Calcutta. I mean the labour efficiency in Burma is very low.

President.—That may be so. We have calculated it this way. We have taken Rs. 115 as the price of Aspen wood.

Mr. Schele.—The price of Japanese wood has gone up on account of a corner by the Bolsheviks.

President.—The wood that you get at Rs. 115, is that Swedish or Siberian?

Mr. Schele.—We get it from our own forests in the Baltic provinces.

President.—You use 20 c. ft. per 100 gross.

Mr. Schele.—Do you mean the local wood?

President.—No, but the Swedish wood.

Mr. Schele.—It will be much less.

President.—I think that you have given some figures but I cannot follow them. Anyhow we were told that the outturn from Aspen was 100 gross per 20 c. ft.

Mr. Schels.—I should say about 12 c. ft. per 50 gross.

President.—It comes to 24 c. ft. for 100 gross.

Mr. Schele.—Yes.

President.—You don't use Aspen for veneers.

Mr. Schele.—No. I would say about 7 c. ft. of Aspen for splints for 50 gross and 14 c. ft. of Indian wood for veneers for 50 gross.

President.—If you take Adamjee's cost as Rs. 40.

Mr. Schele.—I would expect it to be nearer Rs. 50.

President.—They have given all their costs and it works out at Rs. 40.

Mr. Schele.—Even from the Andamans!

President.—Yes. If you take it at Rs. 40, it comes to Rs. 11.1 and your cost will be Rs. 16.1, the difference being Rs. 5 for 50 gross. That is about 1½ annas per gross.

Mr. Schele.—We get that back in the higher price of course.

President.—You get a higher price for your matches.

Mr. Schele.—Aspen sticks sell at a higher price.

Dr. Matthai.—You get two or three annas extra.

Mr. Schele.—Yes.

For veneers.

President.—That is as regards splints. Now as regards veneers, for the Indian wood that you use, I don't think that you have given us the price.

Mr. Schele.—Yes. I have given the prices for different markets—Please see our reply to question 19.

President.—As regards veneers there is nothing to talk about as between yourselves and Burma.

Mr. Schele.—No. The cost given is what it costs us at the factory at Ambarnath. An important point is that we have a right to reject unsuitable logs. We only pay for what we pass.

President.—There you have an advantage.

Mr. Schele.—Yes.

Dr. Matthai.—Is that so at Ambarnath?

Mr. Schele.—Yes.

Dr. Matthai.—Is that the case in Calcutta too?

Mr. Schele.—No. Here the timber trade is quite different. The wood arrives in boats from Sundarbans and we buy in boat loads.

Dr. Matthai.—Do you do the felling yourselves in Burma and Bombay?

Mr. Schele.—We do it to a small extent but the bulk of our supplies we obtain from contractors. They undertake to deliver at Ambarnath subject to our acceptance. Sometimes we have to reject even full wagon loads.

Dr. Matthai.—If you get your supplies of wood from contractors you would have the right to reject any unsuitable wood.

Mr. Schele.—Yes, in certain instances the rejection is done in the forests to save the freight. As it is now they have to incur the railway freight also on logs which will subsequently be rejected.

Dr. Matthai.—As far as you are concerned the wood is delivered at the factory and the rejection also is done there.

Mr. Schele.—Yes.

President.—Do you have many rejections?

Mr. Schele.—Yes.

Mr. Matthias.—What happens to the rejections?

Mr. Schele.—The contractors have to remove them.

President.—You have been fortunate if you have got such contractors.

Mr. Schele.—The method I have explained is necessary. If we don't insist on that, we may sometimes get wood which is unworkable. That is what happens in Burma.

President.—These rates that you have given in Appendix I are they recent rates?

- Mr. Schele.*—Yes, they are the latest rates.
- President.*—Has there been much fluctuation as regards Aspen.
- Mr. Schele.*—Yes. The Japanese Aspen is going up mainly because of the exchange and the Swedish has gone down.
- President.*—How much has it gone down?
- Mr. Schele.*—Nearly 50 per cent.
- President.*—Do you think that the Swedish prices will remain at that level or will they go up again?
- Mr. Schele.*—I should say that they are at the lowest level now.
- President.*—Is this from your own forests?
- Mr. Schele.*—Yes, but if we want we can buy from outside. In that case we would probably have to pay Rs. 10 more per ton.
- President.*—Supposing anybody else wanted to buy?
- Mr. Schele.*—I think that he would probably have to pay some ten rupees more.
- President.*—Is this wood grown in Sweden itself or is it simply called Swedish wood?
- Mr. Schele.*—Part of it comes from Sweden itself and the rest comes from Finland and the Baltic provinces.
- President.*—The Baltic provinces are under whom?
- Mr. Schele.*—They are independent.
- President.*—Have you got forests in the Baltic provinces?
- Mr. Schele.*—Yes.
- President.*—When you import wood, do you get it from the Baltic provinces?
- Mr. Schele.*—Either from the Baltic provinces or from Sweden.
- President.*—Has Sweden itself got a large stock?
- Mr. Schele.*—Yes, a fairly large stock. Sweden is as you know one of the timber suppliers of the world.
- President.*—Which is the season?
- Mr. Schele.*—Now is the beginning of the shipping season.
- President.*—What I wish to know is do these trees grow naturally there or have they to be planted?
- Mr. Schele.*—They grow naturally.
- President.*—There is no plantation.
- Mr. Schele.*—No, We have tried plantation but it was not a success. It was too costly.
- President.*—How long does it take to regenerate?
- Mr. Schele.*—If you plant them, it would take about 30 to 40 years.
- President.*—But if you depended on natural regeneration?
- Mr. Schele.*—It comes to the same thing.
- Dr. Matthai.*—You can hasten the growth if you plant them?
- Mr. Schele.*—In what way?
- Dr. Matthai.*—The theory of the Forest Department is that in the case of artificial plantation, by planting trees at a certain distance from one another, it might be possible to remove obstacles that you have in natural growth.
- Mr. Schele.*—That is rather theoretical. I have never heard of it.
- Dr. Matthai.*—One has heard it said that if a tree under natural conditions would reach maturity in 40 years, you can get the same tree to reach maturity under artificial conditions say in 25 years.
- Mr. Schele.*—That is a point I do not know anything about.
- President.*—What is your opinion as regards natural supplies? Is there any truth in the statement that is sometimes made that the natural supplies are getting short?

Mr. Schele.—That is also very difficult to say. From my own experience I can say that it looks as if we have got to go further and further away for our supplies. It is the same in Burma.

Organization for selecting and testing varieties of wood.

President.—I want to know a little more about your organization for testing wood. So far, I think, you have only four kinds that you have been using. What is this *Machilus*?

Mr. Schele.—This is a species we have discovered in Assam.

President.—Have you made any experiments with other kinds of Indian trees?

Mr. Schele.—Yes, and we selected these four.

Dr. Matthai.—Have you experimented on what they call in Burma *homeza*?

Mr. Schele.—I have not heard of this species on the Bombay side.

Dr. Matthai.—On the Bombay side among the woods that you have experimented with, I see that the species which they call *homeza* in Burma finds a place. How did you find that?

Mr. Schele.—The fact that it is not being used apparently indicates that it was rejected after experiment. I think that that species was one of those with which we made experiments and found very good but subsequently could not obtain supplies.

Mr. Mathias.—So that some of the woods that you turned down was because they were not available in large quantities?

Mr. Schele.—Yes.

Mr. Mathias.—We had evidence that *homeza* was fairly common in Burma?

President.—Do you consider it a good wood?

Mr. Schele.—I cannot say, but the fact that it is not being used rather indicates that there is something wrong somewhere.

President.—Are you still carrying on this research as regards wood on the Bombay side?

Mr. Schele.—Yes.

President.—What sort of machinery have you for research work?

Mr. Schele.—We use our ordinary machines.

President.—Who selects the wood for you?

Mr. Schele.—We get it from our departmental felling agents. Some of them are retired forest officers.

President.—Are they Indian officers or are they Swedes?

Mr. Schele.—One is Indian who was in the forest department and another is a man with practical experience of forest working in India for many years. As they are working the forests they come across new species, which they send to us as samples. We then test it in the factory. When we first started we received wood samples from the Andamans, from the forest department in Bareilly, from South India, etc., etc., and tested them in the factory.

President.—We will examine the forest authorities when we go to Bombay, but from your experiments it does not seem to me that the result is very encouraging. Have you any personal experience about plantation?

Mr. Schele.—Not in India.

President.—Have you any experience of plantation at home?

Mr. Schele.—As far as aspen is concerned I think it grows cheaper on its own and apparently there are so many additional expenses in planting, fencing in, supervision, cost of land, that it becomes prohibitive.

Dr. Matthai.—The real point would be that the question of plantation would depend on the natural advantages of the particular country?

Mr. Schele.—Yes.

President.—Have you personal experience of the forests at home?

Mr. Schele.—Yes, though not as an expert.

Extraction of timber.

President.—You have a regular establishment for felling and extracting?

Mr. Schele.—We have a man on the spot who works with the contractors and we find that the most economical arrangement.

President.—Are these logs always floated?

Mr. Schele.—They are both floated and dragged to the railway.

President.—How do you have the dragging done there?

Mr. Schele.—By sleigh. The entire timber felling is confined to the winter.

President.—What happens in summer?

Mr. Schele.—We don't fell any timber.

President.—It is like Burma; they fell in the monsoon and they do not fell in the dry months.

Mr. Schele.—But it is the reverse in India. They do not fell in the monsoon, they do it in the dry weather.

President.—When you have snow the streams must be frozen too?

Mr. Schele.—They take the logs down to the streams and when the ice breaks up they start floating.

President.—What would be the furthest distance from the wood to the sea?

Mr. Schele.—I cannot say offhand. The logs just slide down on the snow and lie on the river and then when the ice melts they go down into the water automatically.

Mr. Mathias.—In answer to question 21 you say "The impossibility of obtaining an even quality as soon as the timber is required in appreciable quantities can be described as one of our main difficulties with Indian timber. We have discussed this with the forest officers on various occasions and will supply further particulars verbally as indicated under question 12." Apart from the difficulties pointed out are there any other difficulties in the Indian wood which would make it unsuitable for match manufacture?

Mr. Schele.—Yes.

Mr. Mathias.—You say "It is hardly possible to contain our findings which are based on experience at all our factories, within the frame of this report" and say you would give the information when you come to the Tariff Board.

Mr. Schele.—I made that statement mainly because there was very little time at my disposal. You very often find that the log is soft on one side and hard on the other and the result is that the knife is damaged or the peeling very uneven, another difficulty is that the core is not in the middle and that is particularly common in Burma.

Dr. Matthai.—In a tree like bomeza how much do you reject as heart wood?

Mr. Schele.—We come down to 3 inches.

President.—You buy most of the Indian wood more or less from contractors now and you have given up departmental working practically, have you not?

Mr. Schele.—We have the establishment and keep our men in case we need to develop it, but there is no doubt that it pays better to have the work done by contractors.

President.—You don't find it difficult to get all the wood you require in this way?

Mr. Schele.—It has been all right so far in Bombay, but in Burma there has been some difficulty this year and we may have to import aspen to fill up the gap. The trouble is that we cannot get enough sawhya.

Timber supplies in Bombay.

President.—In Bombay you don't use any Indian wood except salai and you use a very small percentage of that. I don't think you have given us the exact quantity of salai you would use.

Mr. Schele.—With our present manufacturing programme I would say 10 per cent.

President.—Are you using it simply for experimental purposes?

Mr. Schele.—Yes, to see how the market will take it.

President.—Do other Indian factories use salai?

Mr. Schele.—I believe we are the only ones who use local wood and others use aspen.

Mr. Mathias.—Supposing owing to a higher duty the cost of aspen was increased to the factories in Bombay and import thereby prevented, would the use of local wood increase at Bombay.

Mr. Schele.—I don't think so.

Mr. Mathias.—You think competition will force prices up?

Mr. Schele.—Yes.

President.—You have made no arrangements at all for the supply of wood for splints. Supposing a very heavy duty was put on the imported wood, then have you got an alternative?

Mr. Schele.—No. This is all we have found out. We have been working for the last three years to obtain suitable Indian wood and this is the best we have found.

President.—What I want to know is have you got any control over any area from which you can get this salai wood?

Mr. Schele.—No, first of all because Government has not allowed anybody to get a concession for the last year or so. In the Bombay territory areas must be put up for tender and we are not going to tender because it would only increase the prices and nobody else has done it either.

President.—Have you made any estimate of the quantities of this wood that you can get economically?

Mr. Schele.—It is very difficult to do that. I don't think even the forest department can say. Even now our supplies are spread over such a wide area.

President.—You know the conditions laid down by the Fiscal Commission as regards raw materials. If we came to the conclusion that a case had been made out for the protection of the Match Industry and if we insisted that only Indian wood should be used, what is the position of the manufacturer of matches in Bombay.

Mr. Schele.—It is very difficult to reply to this question, because it must to a certain extent be guess work, but I think the Bombay factories would have to close down.

President.—The Bombay factories will have to close down and you may shift your factory to other parts of India where you can get the wood.

Mr. Schele.—If we found that it was worth while, otherwise we would give up India altogether, because there is very little profit in match manufacturing here.

Dr. Matthai.—Have you made a survey of all the accessible areas in Bombay?

Mr. Schele.—No, I don't see how it could be done. It would have cost a couple of lakhs and we are not prepared to spend that amount. We have surveyed areas all round Bombay and we have found that we could not rely even on the estimates of our own people. They were too optimistic. We had for instance an area at Nasik. We sent a man up there to inspect and he told us that there was a tremendous supply of match wood. We negotiated with the Conservator of Forests for nearly a year for a concession

and when we received the concession and commenced to work, we could not get more than a couple of 100 trees out of the whole area.

Bengal.

President.—Then as regards Bengal, you tried this one kind of wood genwa and that you bought it through contractors.

Mr. Schele.—I would hardly call them contractors. It is a very big trade in Calcutta. I believe it has been going on for years and years. These men who own their own boats go down to Sunderbans, fill up the boats with logs come back to Calcutta and sell them here to what they call Aratdars who finance them.

President.—How does the boatman get the log? Has he got any arrangement with the forest department?

Mr. Schele.—He pays, I think, a certain toll per boat to the forest department.

President.—Anybody can cut the wood.

Mr. Schele.—I understand that these boatmen would not allow any outsider.

President.—This is very funny. Do you mean to say these people have a sort of monopoly in these forests?

Mr. Schele.—Yes, in the delta area.

Mr. Mathias.—Is Genwa the most common tree?

Mr. Schele.—That is the only tree so far as I know.

President.—It is the only tree that grows there. There must be very large quantities, I suppose.

Mr. Schele.—Yes, but I received a report in 1925 which stated that in 1926 there would not be anything left, but now we are in 1927 and we are still getting supplies.

President.—Have you ascertained what supplies are available as regards the future?

Mr. Schele.—There again if we do these surveys on our own, our overhead charges would go up. We have already spent over one lakh on forest research. I understand that Mr. Shebbeare is now the Conservator of Forests for that division. He can give you a very detailed report. I saw Mr. Shebbeare in 1925 about this matter and we discussed it at length.

President.—The forest officers that have appeared before us aren't as optimistic as you have been describing about this wood. You said in Bombay they gave you some optimistic estimate.

Mr. Schele.—No, those were from our own forest men. I cannot blame the Forest Department for giving any wrong information. What they did in the Sunderbans was to divide the area into certain sections and prohibit felling in certain sections. They tried to arrange a kind of rotation. My report states:—"It takes from 9 to 15 years for a tree to grow from 2 feet girth to 3 feet girth or say an average of 12 years. The present rate of cutting would give you a supply for three years." That was in February, 1924.

President.—Supposing when this is exhausted, what would you do, as regards Calcutta?

Mr. Schele.—I think we would have to use aspen.

Andamans.

Mr. Mathias.—Would you not import sawbya from the Andamans?

Mr. Schele.—Yes, of course if it paid. If we could get wood from the Andamans, we would do so. I have been in touch with the forest authorities in the Andamans since May, 1925, but I have never been able to get any wood from the Andamans. On the 7th September, 1926, they quote for papita Rs. 60 c.i.f. Bombay and Rs. 70 for the other species.

Mr. Mathias.—If you get it at Rs. 60 c.i.f. Bombay, that would be a good proposition. It would pay no duty.

Mr. Schele.—No. Do you mean as a substitute for Aspen?

Mr. Mathias.—There will be no difficulty as regards supplies.

Mr. Schele.—That is what they say.

Dr. Matthai.—At that time against a price of Rs. 115 for aspen you decided that sawbya wasn't a tree worth while getting from the Andamans at Rs. 60.

Mr. Schele.—Yes. We get a higher price for aspen sticks. The actual difference is Rs. 5 in the working, i.e., As. 1-6 per gross. The price of Rs. 115 is what it costs us at the factory. Whereas on this Andaman timber we must pay the landing cost at Bombay and the railway freight from Bombay to the factory at Ambernath.

Dr. Matthai.—Would that be Rs. 10?

Mr. Schele.—Yes. Then of course we would have to keep a man as Andamans to select the wood and that would mean further cost.

Mr. Mathias.—If there was a duty put on imported aspen, it would be possible on the supposition that in the Andamans there are inexhaustible supplies for factories in Bombay to draw their supplies from there.

Mr. Schele.—Provided we get quick shipments. That seems to be the main difficulty with the Andamans. The Forest Officer says:

“There is no direct sailing to Bombay and unless there was a sufficiently large order to warrant the chartering of a special ship, transshipment would be necessary either at Rangoon or Calcutta, to which ports we have regular sailings.

Mr. Mathias.—That would wash out the question of supply, would it not?

Mr. Schele.—It has taken them a year to get the freight on the basis of which he quoted Rs. 60.

Assam.

President.—As regards Assam too, your position does not seem to be very satisfactory. You have got your own concession there.

Mr. Schele.—Yes, but we have given that up.

President.—Because you could not float the logs.

Mr. Schele.—We paid a monopoly fee to the Government of Assam and in order to justify the monopoly, we thought of sending down the wood to Calcutta and selling it there in order to bring down our overhead charges, but we found that it didn't work.

President.—Was not there a sufficient quantity?

Mr. Schele.—That was also a difficulty. The timber was too scattered.

President.—How many tons a year would you get from the concession that you got in Assam? Did you make an estimate?

Mr. Schele.—If you make an estimate only, you get very high figures, but the difficulties of extraction are nearly insurmountable.

President.—Is it due to lack of labour or communications?

Mr. Schele.—Yes, very dense jungle, damp climate and wild animals. Numbers of our buffaloes were killed by tigers.

President.—You have given that up and now you buy them from contractors.

Mr. Schele.—Yes.

Mr. Mathias.—You pay the royalty for extraction.

Mr. Schele.—Yes.

President.—You had a concession for 15 years.

Mr. Schele.—No, one year with one year's option. We didn't avail ourselves of the option. Now we extract on an ordinary permit system.

Dr. Matthai.—You pay so much per tree when you cut it down.

Mr. Schele.—Yes. We discovered these forests and decided to place our factory at Dhulri. Naturally we didn't want our competitors to benefit by our labour and expense. That is why we applied for a monopoly. Now we found that nobody can work these forests, so we have just left the monopoly off.

President.—There is just this one kind of wood.

Mr. Schele.—You get the bombax there very much and machilus. Then you get other species, but they are too much scattered.

President.—What sort of splints do they make?

Mr. Schele.—Fairly good and strong, but rather reddish.

Dr. Matthai.—Better than genwa.

Mr. Schele.—I should say in texture, but not in colour.

President.—Can you send us samples of these?

Mr. Schele.—Yes.

President.—You say that you get some supplies of mango. Is it an ordinary mango?

Mr. Schele.—We thought it was, but it was not.

President.—What kind of mango?

Mr. Schele.—Mango as a rule is white. We thought we would be able to make white sticks. So we made a contract at Rs. 57 per ton delivered at Ambernath. When we received it, it was red.

President.—Have you given that up?

Mr. Schele.—Not only was it red, but also it was twisted in growth.

President.—You have a concession.

Mr. Schele.—I have given you a copy of the concession.

President.—You don't propose to work.

Mr. Schele.—No, it costs too much.

President.—Ernakulam is the only part on that side where you get these case boards.

Mr. Schele.—Yes.

Dr. Matthai.—Why do you go so far as Ernakulam for case boards?

Mr. Schele.—Their quotations are cheaper than anybody else's.

Continued on Thursday, the 14th April 1927.

Introductory.

Mr. Schele.—Before you proceed, may I say a word? I forgot to mention yesterday a very important point in connection with the question of having a separate splint factory, and that is the fuel question. As you know, fuel in a match factory is entirely derived from the peeling department. If you have a separate splint factory, you will have no fuel at your match factory and I daresay that that is one of the main reasons against having any separate factory for splints.

President.—I think that it would be much better if you could give us a note on that.

Mr. Schele.—I shall do so.

Dr. Matthai.—The question of fuel is one of very little importance to a match factory. If you take the cost of fuel, you will find that the proportion of that to the rest of your cost is very small.

Mr. Schele.—Not if you require fuel for steam. I should say that the cost of fuel in a factory like ours at Ambernath would be about Rs. 300 a day.

Dr. Matthai.—You say that it is one of the important points.

Mr. Schele.—Yes, in connection with the question of having a separate factory for splints. It means a little more than half an anna per gross.

Dr. Matthai.—The difference arising out of the difficulty of labour and the difficulty of dividing your overhead charges might be greater.

Mr. Schele.—It is a feature which I entirely overlooked yesterday. It just struck me this morning.

President.—I am going to propose this. I do not know whether you would allow that to be done in your factory. The sample business is rather tricky.

Mr. Schele.—It is.

President.—I am going to make arrangements whereby some forest officer or somebody would go to a factory without any notice and ask for three or four boxes periodically. Will your factory allow that?

Mr. Schele.—Certainly.

President.—So far as Burma is concerned, we shall write to the forest officers there and ask them to do that for us because they know what we want. My idea is that they will go there without any notice and take two or three boxes at random. If I were to ask you to send me, I could rely on your sending me.

Mr. Schele.—It is difficult to rely upon factory samples as a rule.

President.—Because each factory will be careful about its own reputation.

Mr. Schele.—It is in the interests of the factory to show a better quality.

President.—Would you give orders to your factories?

Mr. Schele.—The person whom you will depute for this purpose must have a pass and I shall issue it in his name.

President.—There is one point I forgot to ask you about wood. As regards girth, what is the average girth of Aspen?

Mr. Schele.—About 30 or 32 inches.

President.—That is very small, and you work it down to how many?

Mr. Schele.—3 inches.

President.—As regards Indian wood, what can you do?

Mr. Schele.—We can do anything as long as the trees are all right. As you know, the bigger trees are not so good as smaller trees.

President.—Mr. Adamjee has got an arrangement by which he gets logs of 5 ft. girth. I was wondering whether he could not do, say, with 4 ft. which would give him a much larger quantity.

Mr. Mathias.—Are the hearts of the bigger trees also bigger in proportion?

Mr. Schele.—Yes.

Mr. Mathias.—I noticed in going round the factories at Rangoon that the core which was left behind was sometimes as much as 1 ft. in diameter.

Mr. Schele.—That was from a big tree. That is why I say that only if one finds that the big trees are all right, does one provide for a big machine.

Mr. Mathias.—So, taking into account the large core which is left from a big tree, it may be that a small tree is more profitable to work than a big tree.

Mr. Schele.—Yes, that is why a Calcutta factory is more economical than a Burma factory. All the trees here are much smaller in girth.

President.—Yesterday you told us that you would require 7 c.ft. of Aspen for 100 gross of boxes.

Mr. Schele.—For 50 gross.

Dr. Matthai.—As regards Aspen wood, you say that the diameter will be about 10 inches, if the girth is 33 inches. Out of that, 3 inches diameter would be lost as heartwood.

Mr. Schele.—Yes.

Dr. Matthai.—What about the first two inches just on the layer? Would that have to be shaved off?

Mr. Schele.—That depends on the shape of the log. The rounder the log is, the sooner we start obtaining veneers.

Dr. Matthai.—We were told that a diameter of about 2 inches would be wasted as shavings.

Mr. Schele.—That depends on the shape of the log.

Dr. Matthai.—Could you make a general statement that there is less risk of so much being wasted as shavings in imported Aspen wood?

Mr. Schele.—I cannot say exactly how much is wasted in Aspen because it varies so much, but I know the total waste.

Dr. Matthai.—The fact that you work down to 3 inches, does that depend partly on the machinery and partly on wood or does that depend entirely on the sort of wood?

Mr. Schele.—That is a technical difficulty.

Dr. Matthai.—What about your machinery at Ambernath? If the wood were suitable you could work down to even a smaller diameter.

Mr. Schele.—No, we can't do that.

OTHER RAW MATERIALS.

Chemicals.

President.—You don't wish to give us the exact quantity of chemicals used for 100 gross of boxes. Would you have any objection to giving us the total? I don't wish to know what quantities you used of particular chemicals.

Mr. Schele.—But then if you divide that by our production you will know it.

President.—I don't want to know anything in detail.

Mr. Schele.—Even then, it would be a very good guidance.

President.—Is it such a secret?

Mr. Schele.—Yes, it is a great secret in match-making.

President.—In so many text-books, prospectuses, etc., we have seen the approximate amount given.

Mr. Schele.—It varies, that is where experience comes in.

President.—I would not be able to get any definite idea if you just told me the total.

Mr. Schele.—What do you want to find out?

President.—In this case we have got to make some approximate estimate of the cost of making matches out of Indian wood.

Mr. Schele.—As far as wood is concerned, we worked out the cost yesterday.

President.—It would be to interests in this case to supply us with this information for this reason that supposing we are satisfied that matches ought to be manufactured in this country, we should have no alternative left except to give them more protection if their costs are high; whereas if we are satisfied that the costs ought to be lower, then we will have something to go upon. I am putting it from your own point of view. I do not wish to know anything of your formula.

Mr. Schele.—I think that other manufacturers will give you that.

President.—How can we know that those costs are not too high.

Mr. Schele.—Look at their selling price. Is it likely that everybody would be selling at a loss.

Dr. Matthai.—At a time of very intense competition that often happens.

President.—A man like Adamjee may do.

Mr. Schele.—He is doing so.

President.—Supposing we went on his costs.

Mr. Schele.—His costs are higher than anybody else's. I can go as far as to tell you what the rumour is about the cost prices. I have some idea of what the cost prices of Indian factories are.

President.—That is not the point. The point is what ought to be the cost. What we do is this that we don't encourage any inefficient industries. That is one of our principles. Supposing their costs are Rs. 2 and your costs are Rs. 1-8-0, then the argument is that their costs should go down to Rs. 1-8-0 or a little higher and they would have protection based on Rs. 2.

Dr. Matthai.—We might get facts from other people. But here you are the most experienced people working with the most up to date machinery and your costs will be a sort of standard.

Mr. Mathias.—Would it not be possible for you to give in a lump the cost of chemicals.

Mr. Schele.—We don't like to give it at the present juncture. But I think that I can give you some guidance by showing you our selling prices which are based on the principle of not selling at a loss. If you take our prices you will find that they have been reduced as our cost of production has been reduced. When we have come to rock bottom, we have simply accumulated stocks instead of reducing further.

President.—It all depends on what you call loss. Supposing you do not take depreciation into account.....

Mr. Schele.—The only thing we don't take into consideration is a dividend. Otherwise in our cost accounts every conceivable item is included. There is nothing that we overlook.

President.—I should like to draw your attention to this. Adamjee's costs are not confidential. You have not seen them. They come to Rs. 1-6-0. I may tell you what his costs do not include. They do not include the commission paid to his agents; they do not include depreciation and profits. They are simply works costs.

Mr. Schele.—That shows obviously that he is selling at a loss.

President.—He is not selling at a loss. He is selling at Rs. 1-8.

Mr. Schele.—That is without depreciation.

President.—The price of Rs. 1-8-0 is for both half size and full size.

Mr. Schele.—Half size he sells at Rs. 1-4-0 in Madras. That is really the kind of factory that is causing the present trouble in the market.

President.—What is he to do?

Mr. Schele.—Why does he extend his factory? If everybody has an ambition to cover 100 per cent. of the market what would happen.

Dr. Matthai.—This is his cost for 1925-26. His present price of Rs. 1-8-0 is a little bit lower than the price of last year.

President.—Supposing we came to the conclusion that these costs were correct and reasonable and we also came to the conclusion at the same time that the industry ought to be established and then if we found that Rs. 1-8-0 was not sufficient.....

Mr. Schele.—I am inclined to think that that is the correct cost price.

President.—My point is this that if your costs are lower, his costs ought to be lower.

Mr. Schele.—I can say this much that the costs of factories in Calcutta and Bombay are lower probably by three to four annas compared with Burma. The best factory in Calcutta is Esavi and the best in Bombay as far as I know is Andheri as far as costs go.

President.—Which is the best one?

Mr. Schele.—Esavi is the best.

Dr. Matthai.—What is their output?

Mr. Schele.—5,000 gross a day.

Mr. Mathias.—Where is it situated?

Mr. Schele.—They have two factories; the main factory is just beyond our factory.

President.—Of course we shall examine them. You don't wish to give any indication of your own costs, but you ought to have the lowest cost.

Mr. Schele.—I do not think so, Mr. President. I think ultimately we will have the lowest cost, but in the beginning we have been handicapped by the labour problem. We are a foreign company and our staff is unfamiliar with Indian conditions and labour. Many of our workmen do not remain with us for long; many leave us as soon as they have been trained. Take Esavi for instance. All their foremen are co-religionists or perhaps related. They all come from Surat. They are tied to the proprietors of the Esavi Match Company with bonds of religion and otherwise. We come here as pioneers and everybody wants to take advantage of our inexperience as foreigners to the country.

President.—You have more experience undoubtedly; you have the best machinery?

Mr. Schele.—We sell our machinery to the Indian factories.

President.—When you were equipping yourselves here you would naturally have the best?

Mr. Schele.—Esavi have got a lot of our machines. As far as equipment goes their machines bought from us are just as good as ours.

Mr. Mathias.—You get your machinery at cost price?

Mr. Schele.—We pay the same price as everybody else.

President.—I find in your chemicals also your rates are slightly lower than Adamjee's. You have an advantage there.

Mr. Schele.—We take better advantage of the market fluctuation and therefore we ought to have slightly lower rates.

President.—Is it because you buy in very large quantities? Some of the chemicals you may be making yourselves?

Mr. Schele.—Yes.

President.—You have got a better organization than these people and therefore your costs should be lower?

Mr. Schele.—It is very easy to say. I can say as much as this that cost of production in India is lower than in Burma and I also say that the course of our selling prices rather correspond to the development in our cost prices. We are limited liability companies, our accounts are audited, our accounts are sent to the income tax officers and they know what profit we are making.

President.—You don't make any full size at all in Bombay?

Mr. Schele.—No.

President.—I think you told us yesterday regarding the conversion figure from half size into full size.

Mr. Schele.—As far as costs went, if you take half as 100 then 142 is the cost of full size and I think it is fairly accurate. Then there is another thing. In the Bombay factories they made tremendous profits in the beginning when they imported the empty boxes and sticks and only put the dips on and these profits were used to write off the entire block value of their factories. They have not got to take these values into account any longer.

President.—We do not wish to go by any exceptional circumstances.

Mr. Schele.—After all it means that in their case they have nothing to depreciate.

President.—If he does not depreciate we cannot expect everybody else to do the same. What I say is that if your costs are maintained in the proper way then your costs are a fair indication of what they ought to be. Obviously according to this, if Messrs. Adamjee Hajee Dawood and Company are selling at Rs. 1-8-0 and Rs. 1-9-0 and you are also selling at Rs. 1-8-0, and your cost is Rs. 1-8-0, it is lower than yours?

Mr. Schele.—Our figure includes depreciation and everything and it is only for full size; his is the average of full and half size. That makes all the difference, that is 42 per cent. between the two sizes.

President.—He has not given us separate figures.

Mr. Schele.—He cannot give them; he has not got proper costing accounts.

President.—I have not yet had time to compare your c.i.f. prices of raw materials but at first sight they do appear to be slightly lower than Adamjees. Are they your latest prices?

Mr. Schele.—Absolutely latest. There has been a tremendous reduction in the price of phosphorus for one thing; one year ago it was £225 a ton and to-day it is £175 that is a reduction of £50 per ton and these are our latest invoice prices.

Dr. Matthai.—Is it a sort of speculative price?

Mr. Schele.—It is not so but there is severe competition now between manufacturers in Europe.

President.—Take this phosphorus; that includes 15 per cent. duty, does it?

Mr. Schele.—Yes.

President.—There is a slight difference between your price and Adamjee's in most of these articles. That is due I think to the fact that he has given the invoice amount, and exchange, customs duty, landing charges, etc., whereas you have given only the c.i.f. price.

Mr. Schele.—Yes. Of course the duty is the same, and other charges are not very different.

President.—But I do see that your prices are lower than theirs in most cases. You have a large control over these chemicals, that is the reason. Do you buy your chemicals in your accounts with your subsidiary companies for chemicals and so on?

Mr. Schele.—We buy certain chemicals through the head office and some chemicals we buy independently.

Dr. Matthai.—Take antimony sulphide, for instance. Your price is £5-5-0 per 100 kilo and Adamjees is £4.

Mr. Schele.—The open market in India is lower to-day than our contract prices; that is the disadvantage of big contracts. We make a contract at the beginning of the year and we have to stick to it. For instance you can buy chlorate of potash in Calcutta to-day at £27-10-0.

President.—Are any of these chemicals controlled by the Swedish Match Company?

Mr. Schele.—These are ordinary chemicals used in ordinary trade all over the world.

President.—Are there any chemicals here which are controlled by the Swedish Match Company?

Mr. Schele.—No.

Dr. Matthai.—When you mention Sweden as the country of origin for particular chemicals, do you mean Sweden produces these?

Mr. Schele.—We make them ourselves.

Dr. Matthai.—Your company or the Swedes?

Mr. Schele.—Chiefly our own company. Chlorate of potash we make ourselves.

President.—This phosphorus, is it produced in Great Britain or in France?

Mr. Schele.—Great Britain, France, Germany, Sweden, Norway.

President.—Is amorphous phosphorus chiefly used for the manufacture of matches?

Mr. Schele.—I don't know of any other industry which uses it.

President.—Are there any others in this list exclusively used for match industry and nothing else?

Mr. Schele.—No.

President.—Do you require it in large quantities?

Mr. Schele.—We require about 1 lb. for the full size and $\frac{1}{2}$ lb. for the half size per case of 50 gross.

President.—The question arises only in connection with the duty on raw materials and if there are some raw materials which are only used for matches we may like to consider it, but if it makes a very little difference then it is not worth while considering it.

Mr. Schele.—Take amorphous phosphorus for instance at 1s. 6d. per lb. that is Re. 1. Even 100 per cent. duty would mean only one rupee extra for 50 gross. At the same time you cannot make matches without amorphous phosphorus.

President.—Are these articles subject to duty in Sweden?

Mr. Schele.—I cannot say. I don't know if we have a duty on chemicals, but I can obtain that information for you.

President.—Roughly it comes to between 3 and 4 annas for chemicals and paper and so on per 50 gross. If you take 15 per cent. of that, it is about half an anna that is added to the cost. If you have no duty in your country you have an advantage of half an anna assuming that is what is added to the cost.

Mr. Schele.—That is so.

Mr. Mathias.—Some of these chemicals could be obtained in India could they not?

Mr. Schele.—It is very difficult to obtain a satisfactory quality.

Dr. Matthai.—Don't you find the paraffin in India satisfactory?

Mr. Schele.—The Indian oil companies do not seem to be able to give the melting point required.

President.—Even if you got them locally I don't think that would make any difference about the price because it would be regulated by arrangement between the companies themselves.

Mr. Mathias.—What about red ochre?

Mr. Schele.—That is a very small quantity but there again it is very important to have a very good quality.

President.—The next biggest item is glue.

Mr. Schele.—No. Paraffin and chlorate of potash are the biggest items in the match making process.

President.—Have you got zinc sheets for packing: That seems to be the biggest item?

Mr. Mathias.—The cost of zinc sheet is fairly high. You have given it as £4-10-9 per 100 kilos. It comes to nearly how much per ton.

Mr. Schele.—£45 a ton.

Timber.

Dr. Matthai.—There is just a small point. The amount of wood that goes into splints, if you take a box, is about the same as the amount of wood that goes into the rest of the box.

Mr. Schele.—In the ordinary way you need more wood of course for splints than for boxes.

Dr. Matthai.—If you look at the figures in answer to questions 13, 14 and 15, I thought your figures were based on the assumption that equal quantities of wood were required for both splints and veneers.

Mr. Schele.—As regards Indian wood we have to make a careful selection for box veneers. I have gone into that question particularly. When I wrote this out first, I put a slightly higher figure for splints. Then I went through all the figures again at the factory and found the quantities to be equal.

Dr. Matthai.—What it comes to is this that the amount of wood in the log that goes into splints is the same as the amount of wood that goes to the rest of the box.

Mr. Schele.—Yes, if you take the ultimate result including the waste.

Dr. Matthai.—When you say 20 c.ft. you mean 20 c.ft. in the log.

Mr. Schele.—Yes.

Mr. Mathias.—That is to say there is a large wastage in the manufacture of veneers.

Mr. Schele.—You have to sort them out before you use them. All the veneers that we get are not good for boxes.

Dr. Matthai.—In answer to question 13 you say "normally only 65 per cent. more wood would be required for full size than for $\frac{1}{2}$ size, but the average quality of the wood in Calcutta and Burma falls below that of Bombay". That results in more wastage.

Mr. Schele.—Yes. For instance with the big logs in Burma there are all kinds of disadvantages which make the ultimate result less favourable than in Bombay.

Dr. Matthai.—In answer to question 15 where you speak of packing cases you say that in regard to the half size you require 1.45 c.ft. ready sawn boards. That is finished timber.

Mr. Schele.—Yes.

Dr. Matthai.—You could not give me any sort of rough idea if it is 1.45 c.ft. in planks, what it would be in the log? Would it depend on the circumstances.

Mr. Schele.—I could let you have the information later.

Dr. Matthai.—We got the figure of 5 c.ft. in the log for a case.

President.—Would you have any objection to giving me the cost of the finished case?

Mr. Schele.—I have given it already in my list. Rs. 3-8-0 for half size and Rs. 3-13-0 for full size.

Dr. Matthai.—In answer to question 18 where you speak of departmental felling you say, you are now paying six pies in the area formerly covered by your lease. That is in Assam, is it not?

Mr. Schele.—Yes.

Dr. Matthai.—Is that a yearly lease?

Mr. Schele.—That was the original lease giving us a monopoly.

Dr. Matthai.—Originally was it a yearly lease?

Mr. Schele.—Yes, with one year option. We didn't renew it.

Dr. Matthai.—Now there is no question of a lease at all. It is a question of simply extracting wood on a permit.

Mr. Schele.—Yes, just on an ordinary permit system. A lot of other people do the same.

Dr. Matthai.—These two places, Umbra and Kopoli, are they in the Bombay Presidency?

Mr. Schele.—Yes.

Dr. Matthai.—What area? Is it Colaba area?

Mr. Schele.—I don't remember. I think it is in the Colaba division.

Dr. Matthai.—You are paying a higher royalty for mangoes.

Mr. Schele.—Yes.

Dr. Matthai.—That was because you thought they would be suitable for splints. You don't think so any more.

Mr. Schele.—No.

Dr. Matthai.—In Honawar you pay Rs. 6 per acre for clear felling.

Mr. Schele.—Yes.

Dr. Matthai.—You fell down all the trees in the area.

Mr. Schele.—Yes.

President.—And then you take incidentally whatever match wood is available in that area.

Mr. Schele.—Yes, and we sell the hard wood.

Dr. Matthai.—Have you any idea when you undertook clear felling in that area, what it would cost per ton of match wood? Have you any idea at all?

Mr. Schele.—The matchwoods down there cost between Rs. 60 to Rs. 70 per ton at the factory.

Dr. Matthai.—You are not working that now.

Mr. Schele.—We are. This is the last period. We started last year rather late and we thought it was on account of the deficient organisation that we were not successful. We thought we should give it another trial this year too.

Dr. Matthai.—You say that other Companies have been given more favourable rates.

Mr. Schele.—Yes.

Dr. Matthai.—Do you know of any other?

Mr. Schele.—Guzerat Islam Match Factory.

Dr. Matthai.—How much does it pay?

Mr. Schele.—About As. 4 to As. 6 per cart.

Dr. Matthai.—A cart is one third of a ton.

Mr. Schele.—Yes.

Dr. Matthai.—In your answer to question 19 where you give the cost of the wood at the factory, you don't give the Assam cost. What is your Assam cost?

Mr. Schele.—So far we have been rather unsuccessful in Assam which is chiefly due to an unsuitable man having been in charge. He has now left our service.

Dr. Matthai.—Are the costs high in Assam?

Mr. Schele.—Yes.

Dr. Matthai.—What was that due to—extraction or transportation?

Mr. Schele.—On account of extraction. As a matter of fact we did not get the wood down to the factory.

Dr. Matthai.—Now it is improving.

Mr. Schele.—We have dispensed with the old man and we are putting a new man there. It is very difficult to extract wood in Assam. It is a very dense jungle. Labour is very scarce and does not want to remain there.

Dr. Matthai.—And the question of rafting also is very difficult.

Mr. Schele.—Once you have got the wood out to the Brahmaputra, rafting would not present any difficulty.

Dr. Matthai.—Then in answer to question 24 where you speak of plantation you say: "As long as wood can be obtained through contractors, a plantation on private initiative would increase overhead expenses and place the originator less favourably in the present competition". But if you look to the question of the security of supplies.....

Mr. Schele.—But there is no security in the whole industry.

Dr. Matthai.—In what way?

Mr. Schele.—Government may say next year that the industry has no right of existence. If we had invested capital on plantation where would we be?

Dr. Matthai.—Assuming for argument's sake that we declare the industry is one which requires protection and to that extent the tariff is secure, then the question of plantation might assume a different aspect.

Mr. Schele.—Then again it may seem more advantageous to get wood through contractors.

Dr. Matthai.—Supposing as a result of experiments on various kinds of trees you find that certain trees are good enough for match-making, and they don't at present grow in sufficiently accessible areas or in sufficiently compact areas, then you might start an artificial plantation.

Mr. Schele.—We would probably go into that very carefully. If the industry was established we would again go into the question. But when we made our last calculation we found that it would not pay unless the timber prices are very much higher than what they are to-day.

Dr. Matthai.—You mean timber prices as you get them from the contractors.

Mr. Schele.—Yes.

Dr. Matthai.—But I thought when I read your answer the difficulty at the back of your mind was that while the position of the Match industry in India from the point of view of tariff assistance was so uncertain, it would of course be out of the question to incur all the capital expenditure required for a plantation, but if ultimately it so transpired that the industry was placed on the footing of a definitely protected industry, then you would think differently with regard to plantation.

Mr. Schele.—We should certainly go into the matter again and see what could be done.

Labour.

President.—In answer to question 32, you say that you have got 17 European experts. Would you have any objection to tell me how many you have got at Ambernath,

Mr. Schele.—Nine at Ambernath.

President.—I suppose some of them are mechanical experts and others may be chemists.

Mr. Schele.—Yes. The chemists in the factory is really the factory manager. He is not included. To this must be added one factory manager and two accountants.

President.—Could you tell us what they cost, the eleven of them?

Mr. Schele.—About Rs. 10,000 a month.

President.—I suppose this is the minimum number of Europeans that you can do with in your factory or can you reduce the number as you go on?

Mr. Schele.—I think we can reduce them as we go on.

President.—In what departments do you think you would be able to employ Indians out of this number?

Mr. Schele.—First of all we don't need as we go on the same detailed supervision. All the labour is now new and we get unfortunately every year new labour. So far there is a continuous labour training going on. Naturally labour can't be trained by anybody else except by an old hand. In fact when those things settle down, as I hope they will although they have not done so far—we would certainly be able to reduce the number of Europeans.

President.—I may just point out to you that there is a feeling in the country that in most of these industries, Indians in large numbers are not sufficiently employed.

Mr. Schele.—Yes. One manufacturer even said that "No Indian was allowed in our factory". In fact we have more than 3,000.

President.—I don't know who said that. It is not merely the employment of Indians, but also the opportunity of learning the business.

Mr. Schele.—Our Parel factory was run by an Indian entirely on his own. There was not one European in that factory. In the first instance, we had one man from Southern India who was not up to the mark.

President.—Obviously there must be processes which you would not allow any outsider to learn.

Mr. Schele.—He did everything.

President.—Including the formula?

Mr. Schele.—Yes.

President.—Have you still got him?

Mr. Schele.—Yes.

Dr. Matthai.—But the factory has closed down.

Mr. Schele.—We are not going to let him go. He will be transferred probably either to Burma or Calcutta.

Dr. Matthai.—Is he still in your service?

Mr. Schele.—Yes.

President.—Was he trained by you?

Mr. Schele.—Yes.

Dr. Matthai.—What was he before he joined you?

Mr. Schele.—I don't remember, he is a Bengalee.

Dr. Matthai.—Is he a chemist?

Mr. Schele.—No.

President.—It is pleasing to learn that you have got a Bengalee who looks after your business in Bombay whereas I don't see any Bengalee in your factory in Calcutta.

Mr. Schele.—There are Bengalees in our Factory here, but they are not in charge.

President.—No man is a prophet in his own country.

Mr. Schele.—We have 3,491 Indians in our factories.

President.—We have heard a complaint made we don't say that it is justified but that it is made—that there is a tendency to employ Indians in the lower departments and Europeans in the higher departments.

Mr. Schele.—For obvious reasons.

President.—They don't consider them obvious.

Mr. Schele.—Every body with common sense must understand that it is not possible to run an old industry like the Match Industry without bringing in experts. The other factories have got Japanese experts.

President.—At present you have not been long enough in the country I admit. I am only trying to point out the general feeling.

Mr. Schele.—I think that it is really one of the most unfounded statements that have been made.

Dr. Matthai.—Nobody ever suggests that you can do at present without imported experts. It is only suggested that you can reduce the number. It does not seem a matter of common sense to say that the number cannot be reduced.

Mr. Schele.—That is why I say that we can reduce it materially.

President.—It may be common sense to some people to feel that nobody can learn anything in 50 or 100 years, but it is not common sense to my mind to say that no one can learn anything under 50 or 100 years. To say that this requires very high training and that one must go there as a boy of 7 and live up to 93 before he can ever be put in charge of a department is not common sense.

Mr. Schele.—The complaint is made regarding the present state of affairs. We have only been working here for the last three years.

President.—As I was pointing out to you a little while ago, so far as this particular industry goes, the complaint is premature, one may admit that. But I am trying to ask you as to what chances Indians have of being taught the business.

Mr. Schele.—I think they have every chance. It is in our own interests to reduce the expenses as much as possible. We don't have more than 12 including the Factory Manager and two accountants at Ambernath. On the first occasion that we think we can reduce the number we will do it.

President.—What is your general experience of Indian labour? In the first place I take it—I am now confining myself to Ambernath—that most of the work is done by machinery.

Mr. Schele.—Yes.

President.—Do you use much manual labour? Apart from looking after machinery, is any hand filling done?

Mr. Schele.—We do, but very little.

President.—That I suppose is in connection with the rejected matches.

Mr. Schele.—Yes.

President.—Apart from that everything is done by machinery.

Mr. Schele.—Yes.

President.—Is it really very difficult to train Indian labour for that? The machinery is more or less automatic, is it not.

Mr. Schele.—Yes.

President.—It is chiefly repetition work.

Mr. Schele.—Yes.

President.—So that it does not seem that it is a very difficult thing.

Mr. Schele.—I don't think so, judging by the results that we have achieved. The main difficulty is that once we have trained a man we cannot depend on him to remain.

President.—That of course is a special feature of Indian labour. It is likely to shift, but apart from that, the degree of intelligence required is not very high for this kind of work. Don't you agree?

Mr. Schele.—It needs only average intelligence. But of course the more intelligent a man is, the better he does his work.

President.—Do you pay them monthly or do you pay by piece rates?

Mr. Schele.—Chiefly piece rates.

President.—That is to say, in all departments do you pay like that?

Mr. Schele.—Yes, wherever we can do it. That is necessary in a big industry like the Match industry.

President.—Is that how you have worked out the wages?

Mr. Schele.—Yes.

President.—If a labourer is inefficient, what will happen is that some time is wasted even if you pay by piece rates. Otherwise it would not make much difference.

Mr. Schele.—If the labour is inefficient, it would mean not only waste of time but also waste of materials.

President.—Supposing a man wastes more materials, do you fine him or what do you do as regards the payment to him?

Mr. Schele.—First of all we have piece rates. A labourer gets a certain amount per basket. If he wastes materials, he does not get the same quantities to fill up the basket. In that way a bad worker earns automatically less than a good man. Of course that is the basis of the whole piece work system. A good worker can always earn more money.

President.—How many principal departments have you where you pay by piece rates?

Mr. Schele.—Wherever we can.

President.—Is there a known market rate for this kind of work in Bombay?

Mr. Schele.—No. As a matter of fact we have during the last two weeks reduced our piece rates at Calcutta and Bombay on the basis of our own experience. There was a strike in Bombay when I left for this reason.

President.—In what department?

Mr. Schele.—All through the factory.

President.—Is that the system under which you employ labour in Sweden?

Mr. Schele.—I should say all over the world big industries work on piece rates system.

President.—They sometimes pay a bonus. The bonus is divided between the people working in the whole department.

Dr. Matthai.—You don't have a bonus system in your factory?

Mr. Schele.—No. There is this disadvantage that the quality will suffer. Everything will be packed in the case, irrespective of quality because the bonus is paid per case.

President.—Can you tell us what would be the percentage of wastage in Sweden, due to labour?

Mr. Schele.—I can't give you the exact figure, but the percentage would be very small.

President.—Do you ascribe that wastage to the labour being inefficient?

Mr. Schele.—To inefficient labour, as far as wastage is caused by labour.

President.—Would you object to give us the cost of labour per unit?

Mr. Schele.—I cannot tell you that.

President.—I must again tell you, Mr. Schele that if we are not enlightened on this point we may have to accept higher costs of manufacture for purposes of our calculation. I don't think you fully realize the situation. If we came to the conclusion that the cost of the Indian manufacturer is high and if we find that this protection of Rs. 1-8-0 is not sufficient, it will have to be raised.

Mr. Schele.—That will be to our advantage.

President.—You don't know what may happen in either direction. You assume that if the duty goes up you will manufacture more matches in India.

Mr. Schele.—Yes, our factories will still be there.

President.—That is an assumption which may not turn out as you expect.

Mr. Schele.—Our factories cannot be wiped out from the face of the earth. They will be there in some form or other.

President.—Supposing the country came to the conclusion that manufacture on those lines by a foreign company was not to be allowed, in that case—I don't express any opinion—what will happen? You base your case on the assumption that if the duty goes up you will manufacture more matches here. That assumes that there will be no change in the present position.

Mr. Schele.—I don't think we will necessarily make more matches but we will continue. Our imports will stop and we will arrange our factories accordingly in Sweden.

President.—We want you to understand this so that we may not be told afterwards that you had no opportunity to put your case, that if we don't know your costs and if we were to accept the Indian costs which, for the sake of argument, let us say, were higher than yours, and we came to the conclusion that Rs. 1-8-0 did not give the industry sufficient protection, then it is possible we may recommend an increase in the duty. You say it does not matter; if that is done you would go on with your factories in this country. Supposing we came to the conclusion that your factories should not manufacture matches in this country then what is your position?

Mr. Schele.—We look upon this from an entirely practical point of view. Anyhow the imports will come to a close very soon with the present duty as I said yesterday. We are looking upon that as a thing of the past. We have our factories here now. If you find after I have explained all our methods and our aims to you that we are not worth making matches in this country we have to submit ourselves to your decision. I mean to say if we have to hand over our factories to Indians we may have no objection at all.

President.—In that case this question of costs is very important.

Mr. Schele.—Now the import is coming to an end as I have said, and we have only to look at the local manufacture. If you give it more protection it will not make any difference to the local manufacturers because their rates will be exactly the same as they are to-day on account of competition. Even if you put a duty of Rs. 5 on imported matches Indian factories would still sell their matches at Rs. 1-8-0 for full and Rs. 1-4-0 for half size, and if we sell our factories to Indian shareholders they will certainly sell at the same rate as we do to-day. So I do not see where the difference comes in at all.

President.—The difference comes in this way that it may entirely affect the measure of protection or the method of giving protection.

Mr. Schele.—Given certain indications I can tell you what the costs to first class Indian factories are to-day.

President.—We have got to listen to both sides and I think it is my duty to point out to you that if your company withholds from us information on this most important point, we cannot reasonably take your cost into account, and it is for that reason that I am suggesting to you that more information should be given to us than you are prepared to do.

Mr. Schele.—At the same time I think you will not get as much reliable and technical information from anybody as we have given you. I have really gone out of my way to satisfy the Tariff Board.

President.—We are very much indebted to you for the information you have given, but this is a most important point in this enquiry and on that you are in a position to give me very valuable information. I have no powers to compel you to it but you must realize my position, also that when I come to consider the proposals I will have this difficulty that I know nothing about the position of your company on this point.

Mr. Schele.—We do not claim anything in this case. Whatever you do we shall be satisfied.

President.—I am very pleased to hear that.

Dr. Matthai.—This enquiry has arisen not as a result of application from anybody but as an independent reference by the Government of India to the Tariff Board. The point of view I would put before you is this. Here is an enquiry undertaken by the Government practically on their own

initiative. You are at present part of the Indian industry. We are asking for your co-operation and in any tariff enquiry the question of cost is the most vital factor.

Mr. Schele.—At the same time the most difficult question.

Dr. Matthai.—Certainly, but you are not prepared to co-operate with us in an enquiry into this difficult question. Now, we have investigated this question in Burma and the biggest unit in the match industry in that province have placed all the facts before us. You are the most powerful unit of the industry in India at present and you have less fear of competition as I look at it.

Mr. Schele.—I don't think you are right there.

Dr. Matthai.—You are withholding assistance from us in an enquiry which is going to be an enquiry of some difficulty and that is the point of view we should like you to take into account.

Mr. Schele.—At the same time you must admit that at the present stage the Swedish Match Company and myself have really done a good deal to facilitate your labour.

Mr. Schele.—There was no need at all for me to appear at this early stage and nobody else could have given you the information that we have given except on this only point. I think you will understand me. I could have appeared later on when you came to Bombay, but by appearing before you prior to my leave for Europe we are giving the other members more time to consider this matter, which must be a distinct advantage. I venture to say it ought to be anyhow. The only point on which we do not give you any information is this point of cost.

President.—That is the most important point.

Mr. Schele.—After all, you have asked many questions and we have replied to all barring one.

President.—It was very good of you to have given all this information. But even if you had not given any information the interest of the Board would not have suffered because in that case we would have said that the Swedish Match Company does not want anything. I should have simply said they have no case, we shall pass our orders as if they do not exist.

Mr. Schele.—What I said was that whatever you would have done would have been gratefully accepted by us in any case. If you have followed the enquiry into the match industry in any other country you will find that nothing like the information we have given you has been supplied. There is a big enquiry going on in Australia at present; they don't get information like what we have given you.

President.—Their methods are entirely different from ours. I am not trying to put any pressure on you, only that I don't wish the Swedish Match Company to say—supposing orders were entirely adverse to the Swedish Company—that they had no chance of putting their case.

Mr. Schele.—Yes, you can put that on record.

President.—You fully realize the position?

Mr. Schele.—Yes.

President.—As regards wages, the Burma wages appear to be lower than in Bombay?

Mr. Schele.—Yes.

President.—That was my impression and I told people there, but they said it was not so. This Burma labour is chiefly imported labour, is it not?

Mr. Schele.—I would not say so. If you take all the labour, male and female, we have got 138 women and 161 men. All the women and some of the children are Burmese. I should say 50 per cent. of the labour is Burmese and 50 per cent imported.

President.—Even so I am not able to understand why the wages in Burma as regards factory and other labour are lower than the wages in the industrial parts of India.

Mr. Schele.—I think they are less efficient.

President.—In the match industry anyhow women are supposed to be more efficient in Burma.

Mr. Schele.—Generally the Burmese woman is more efficient than the Burmese man, but labour in Burma is not as efficient as in India.

President.—You say in Ambernath about 10 per cent. of the labour comes from the Bombay Presidency.

Mr. Schele.—That is so.

President.—Where does the rest of the labour come from?

Mr. Schele.—From all over the country. As a matter of fact I asked for figures from the factory Manager and he states "we have had batches of people from places like Satara, Nasik, Bangalore, Mangalore, Sholapore, Madras, Punjab, Delhi" and so on. Then he goes on to say "It is remarkable that out of the people at present engaged by us only 10 per cent. comes from the Bombay Presidency, the reason being that Ambernath is a lonely place.

Dr. Matthai.—How does it compare with the cotton industry?

Mr. Schele.—They are in the town of course so that what he says in the case of Ambernath does not hold good there.

President.—I see that you have got fairly good arrangements for housing your labour. I think you said about half your labour is housed in your own factory, is that so?

Mr. Schele.—About 75 per cent. It varies from time to time. Particularly it varies at Ambernath, because we were working double shifts up till November last. That meant the dismissal of 1,200 people; if you had asked me in November, I could have given you the exact percentage.

President.—Now your labour force is 1,517.

Mr. Schele.—Yes, it was 2,700 before. All workmen don't agree to pay the rents for workmen's quarters and some prefer to live in Kalyan rather than in our quarters. I should say 75 per cent. is housed with us.

President.—In your quarters.

Mr. Schele.—Yes, we would like to have all of them over there, because we would then have better control.

President.—It is a pity that we have not had a chance of seeing it. I propose to reserve this part and subsequent parts of the examination until after we have seen the works.

Mr. Schele.—Yes.

Power.

President.—Do you use entirely electric power in Ambernath?

Mr. Schele.—Yes.

President.—Do you get it from Tatas?

Mr. Schele.—No. We get it from the Development Department. They have their own power station at Ambernath.

President.—The Development Department of Bombay.

Mr. Schele.—Yes, they have Diesel motors.

President.—Is it run only for your factory or for others?

Mr. Schele.—The idea was to make Ambernath a big industrial area. The only people who came however were ourselves. There is one other industry, Dharamai Mararji Chemical Company and Woollen Mills. I think they have their own power station.

President.—Have you got a long term arrangement with them or what?

Mr. Schele.—I think we have 5 years option.

President.—Do they charge you a flat rate per unit?

Mr. Schele.—No, on a sliding scale system.

President.—In Burma they charge per horse power and also per unit.

Mr. Schele.—That has already been taken into consideration for this rate.

President.—Is it a little higher than Tatas or about the same?

Mr. Schele.—As. 0·7. But I understand that their rate is coupled with certain conditions that the consumer must take a very high load, etc.

Mr. Mathias.—The Calcutta rates are rather cheaper than Tatas just now?

Mr. Schele.—As. ·7 comes to 8·4 pies, whereas the Calcutta rate is 10 pies per unit.

President.—Then the rate in Sweden is 2 pies per unit.

Mr. Schele.—Yes, that is an average.

President.—That is because you have got those superstations.

Mr. Schele.—That is the rate from our big water falls for general distribution. In Sweden you very often find that an industry has got its own water falls and generates its own power.

President.—Do you make your own power there?

Mr. Schele.—We have our own power centres. In some places we buy electricity. I think it is a fair average.

President.—In answer to question 40 you say:—“Waste from the peeling machine, but not sufficient at Parel, Assam and Burma.” But you would require some steam even at Ambernath.

Mr. Schele.—We will require a considerable amount.

President.—That you get from your wastage.

Mr. Schele.—Yes.

President.—You don't have to buy any other fuel.

Mr. Schele.—No.

Dr. Matthai.—Is that mainly for drying?

Mr. Schele.—Yes and for boiling the wood.

Mr. Mathias.—In answer to question 41 you say “our cost of power per case” per case of what?

Mr. Schele.—Per case of 50 gross.

Market and Prices.

President.—As regards market now you estimate the consumption at about 16 millions.

Mr. Schele.—Yes.

President.—I could account only for about 14 millions locally made including your production and Adamjee's.

Mr. Schele.—We have not sold our production. Even the figure given by Adamjee is much higher than he has been making.

President.—His output is 1,100,000.

Mr. Schele.—That is higher than what he has made.

Mr. Mathias.—Do you mean that if he has made, he has not actually sold it?

Mr. Schele.—He has not actually made.

President.—1,087,000 gross is his actual output. If you take the imports, it is very nearly 8 millions.

Mr. Schele.—The import of matches does not mean that the imported matches have been sold as there may be heavy stocks. I think the best way really to arrive at the figure is to divide the revenue that Government has got by 1·5. They show their revenue for last year.

Mr. Mathias.—What advantage has that over the trade statistics?

Mr. Schele.—Because the latter show landed figures. They may remain in bonded godowns, where you can keep them for years without paying the duty.

Dr. Matthai.—The figures given in the trade returns, aren't they quantities on which revenue has been collected?

Mr. Schele.—No. This is how I have worked out. If you take the 10 years since 1912 and up till the introduction of the duty you get an average yearly consumption of 14·2 millions and then you have a small export of 0·2 from India. Thus you get at a nett consumption of 14 millions. My contention is this: It is not possible that the consumption since 1922 has increased to the extent of even 2 million gross, because if you look at the previous period from 1912 to 1922 there is no indication that the consumption during that period was on the increase because it is exactly the same if you look apart from the abnormal war years. I don't think it is possible that the consumption could have been increased to the extent you mention.

President.—Now I think we will be able to get a fairly accurate idea. We have issued questionnaires to all the match manufacturing companies. We can get their production and we have got the import figures.

Mr. Schele.—It is a great puzzle to me. If you really take the figures that the factories give, it would come up to 21 millions which of course is absurd. Why should it have increased to that extent?

President.—Why should the consumption not have increased?

Mr. Schele.—Not to that extent. How is it possible? Why should people suddenly start using more matches to such a considerable extent.

President.—Because matches are getting cheaper.

Mr. Schele.—You don't necessarily use more matches if they are cheaper.

President.—Working classes may use more matches.

Mr. Schele.—It would mean 50 per cent. increase.

Dr. Matthai.—We have no figures to show how far smoking has advanced.

Mr. Schele.—What I am basing my argument on is that during 1912 to 1922 if you look at the figures there was no increase.

Dr. Matthai.—What do you mean by "no increase"?

Mr. Schele.—I mean no increase in consumption.

Dr. Matthai.—In 1918-19 you had a figure of 19 millions.

Mr. Schele.—That was a war year.

President.—But I think matches have never been so cheap as they have been since the war.

Mr. Schele.—They were cheaper before the war.

President.—Since the war.

Mr. Schele.—No.

Mr. Mathias.—May I suggest that very high prices of matches during the war kept consumption abnormally down and since the war as the prices decreased, the consumption has steadily increased?

Mr. Schele.—I think so.

Mr. Mathias.—That would account for what you call "abnormal increase to 21 millions."

Mr. Schele.—I don't think it would account for an increase to that extent, because you had a cheaper match in 1912.

President.—That was a very long time ago. The country has advanced very considerably since then.

Mr. Schele.—I can't say. I have been here only for 4 years.

President.—The consumption of most other things has increased. As I was telling you we would have to make an estimate from the actual imports and the actual production.

Mr. Schele.—As regards the question of actual production people are rather inclined to overestimate their capacity.

President.—We are asking for actual production during the previous year. We have asked them a question about their capacity. We have also asked them what the actual production was during particular years.

Mr. Schele.—That is you can get the information provided everybody gives correct information.

President.—I think the bigger factories can be relied upon more or less for giving actual figures. They have no interest in saying that they produce more.

Mr. Schele.—I am not so sure about that. I have got figures from all the factories.

President.—What is your total?

Mr. Schele.—It comes to something like 21 millions.

President.—It doesn't sound absurd to me. My own idea is about 20 millions.

Mr. Schele.—The future will show that, I suppose.

Dr. Matthai.—You consider 21 millions an impossible figure in the light of your general experience.

Mr. Schele.—Yes, it is. Take Europe. You have had the same development in Europe in smoking as here. People were not smoking 17 years ago there as they are now.

President.—I don't think smoking has so much to do here as in Europe because people want matches for household purposes to light their fire.

Mr. Schele.—The bulk of the consumption comes from the smokers.

Dr. Matthai.—I think the war was probably responsible for an increase in the smoking habit of the people.

Mr. Mathias.—The revenue Government derived from matches was Rs. 113 lakhs.

Mr. Schele.—Which year was that?

Mr. Mathias.—1924-25.

Mr. Schele.—It comes to about 7.5 millions.

Mr. Mathias.—That is almost exactly the same.

Mr. Schele.—Yes.

Mr. Mathias.—The duties on matches are all collected at the ports.

Mr. Schele.—Yes.

Mr. Mathias.—And then a refund is payable when you take them out of bond.

Mr. Schele.—If you put them in bond, you don't pay the duty.

Dr. Matthai.—Do you think that the cheaper price has led to any increase in consumption?

Mr. Schele.—People have different opinion regarding that, but I think so myself.

Dr. Matthai.—The price has come down from 3 pies to 1½ pies per box. Does not that stimulate consumption?

Mr. Schele.—That is the only explanation I can find for the increase at all.

Mr. Mathias.—If there is any considerable increase in the manufacture of sulphur matches, the consumption of matches would tend to go down.

Mr. Schele.—In accordance with what I said yesterday, I would say so.

Mr. Mathias.—That is to say the cheaper the strike anywhere matches become, the more economy is possible in the use of matches.

Mr. Schele.—Yes.

Dr. Matthai.—What is your experience in other countries? Is it generally recognised that a gradual lowering of the prices has led to an increase in the demand?

Mr. Schele.—Yes.

President.—What do you consider your principal markets in India?

Mr. Schele.—I think that we are equally strong everywhere.

President.—I suppose that in bigger towns you sell more matches than in villages.

Mr. Schele.—Yes, everybody does so *pro rata*. We cannot take out one particular market and say that that is our stronghold.

Mr. Mathias.—You said yesterday that so far as imported matches were concerned, you sold them in big towns and that wherever you sold imported matches, you abstained from putting on the market your Indian made matches.

Mr. Schele.—Yes, otherwise we would be competing with ourselves.

Mr. Mathias.—On that statement it would follow that large towns would be the market for imported matches and that up-country would be the market for Indian matches.

Mr. Schele.—Yes, but we have lately been compelled more or less to extend our activities in Indian matches to every part of India on account of the difficulty in disposing of our production.

Mr. Mathias.—That is you are knocking out the sale of imported matches.

Mr. Schele.—We now sell indiscriminately everywhere. Take for instance Madras. Formerly Madras was practically confined to imported matches. Then the Santa Cruz factory in Bombay and the Adamjee's factory, Rangoon, started to send their locally made matches there at very low rates.

Dr. Matthai.—What you say about Assam and Burma is that in those two provinces not merely in the matter of sizes but generally there is a preference for imported matches.

Mr. Schele.—Yes, it also applies to a certain extent to the Punjab, Madras and Karachi. It is really due to the monsoon. Wherever there is heavy rainfall, you will find that people require imported matches. That consideration combined with how well off people are—these two factors really explain why imported matches are being sold.

Dr. Matthai.—The bulk of Madras is not a monsoon area, in the sense in which Bengal is.

Mr. Schele.—Quite.

President.—Your principal markets are Madras, Karachi and Burma.

Mr. Schele.—Up till now. Things are moving very rapidly indeed. A few months ago the position was not the same.

President.—In the case of Bengal and Bombay the imports have been steadily diminishing but so far as Madras and Burma are concerned, there has not been very much change.

Mr. Schele.—That is correct.

President.—In Bengal, the imports have come down to a million gross. In Bombay, it is a little over a million and a quarter whereas it used to be four millions before. In Madras it is more or less in the neighbourhood of a million all the time since before the war. So is the case in Burma.

Mr. Schele.—In the case of Burma you will have to take into account the smuggling that was going on which interfered with the importer. There was no duty between Siam and India.

Dr. Matthai.—The figures are practically the same since 1920.

Mr. Schele.—To that you must add local production.

President.—The imports have not been affected in Madras and Burma.

Mr. Schele.—There is no local industry in Madras whereas there is one in Burma. That will explain why the Burma figures have not increased although the trade with Siam was stopped.

President.—It sends its matches to Madras.

Mr. Schele.—That is only recently. If the free import from Siam had not been there, the figures would have been much higher.

President.—As regards other countries during the war Japan more or less took your place.

Mr. Schele.—Yes.

President.—In India it did more than that because practically all the matches came from Japan.

Mr. Schele.—One year our imports came to 0·8 per cent.

President.—It was in 1918, I think.

Mr. Schele.—Yes.

President.—Then what happened is that the Japanese matches have been knocked out of the country and that you have re-established your pre-war position more or less so far as your imports are concerned.

Mr. Schele.—Yes.

President.—Is it not a fact that both your Indian made matches and other Indian made matches have knocked out the Japanese matches?

Mr. Schele.—Yes. When matches were made locally, they started to compete with the Japanese matches and when they had knocked out the Japanese, they started to affect the Swedish.

President.—Now the competition therefore is between your imported matches and local matches here.

Mr. Schele.—Yes, *plus* rather a fair percentage held by Czecho-Slovakia. You must take other countries into account. Of the other countries I put Czecho-Slovakia first. The figure for last year was 716,000 gross for Czecho-Slovakia and 140,000 for Norway.

President.—Your contention is that matches that come from Germany and other countries may be Czecho-Slovakian matches.

Mr. Schele.—I know that. We wrote to the Collector of Customs and asked where these matches came from. We were told that they came from Czecho-Slovakia. In the Trade Returns, I understand, they have been classified in accordance with the port of export.

President.—What I want to be clear about is this. You have got nearly 5 million gross in 1925-26 and Japan only 2½ million gross. Now Japan has come down to nearly a million whereas your figure remained more or less the same.

Mr. Schele.—Yes.

President.—You are competing against Japan here.

Mr. Schele.—Yes.

President.—Now of course when the Japanese matches have disappeared there is competition between yourselves as importers and yourselves and Indians as manufacturers of matches in India.

Mr. Schele.—Yes.

President.—As regards sulphur matches you say they are manufacturing these matches now in Bombay. Is that the only province in India where sulphur matches are manufactured?

Mr. Schele.—Yes, because sulphur matches are chiefly supplied from Bombay. There is no consumption of sulphur matches in Burma or in Bengal.

President.—What I wish to know is, what do you consider to be the prospect of the sulphur matches in this country? Do you think it is a good proposition?

Mr. Schele.—I think it has as much prospect as the safety match industry.

President.—Is there anything specially difficult in the manufacture of sulphur matches?

Mr. Schele.—They are supposed to be more difficult to make, but apparently these factories in Bombay have overcome the difficulties.

President.—So far as manufacture goes is there any greater difficulty in the manufacture of sulphur matches than safety?

Mr. Schele.—Technical people look upon sulphur matches as more difficult.

Mr. Mathias.—In the case of sulphur matches instead of being dipped into paraffin they are dipped in sulphur, is that correct?

Mr. Schele.—Yes.

Dr. Matthai.—Is it more expensive to manufacture them in Bombay?

Mr. Schele.—I do not know.

Dr. Matthai.—In other parts of the world what is the position? Is it supposed to be more expensive?

Mr. Schele.—It is very much the same.

President.—In the monsoon do they light as well as these other matches?

Mr. Schele.—Yes.

President.—Are not the heads affected?

Mr. Schele.—They light quite as well.

President.—As regards these c.i.f. prices have these been averaged? What we wanted was the average for each individual year.

Mr. Schele.—We have not given particulars because there has been no change. From 1920 onwards we were going down slowly from 4 shillings, but we did not do any business for some time.

Mr. Mathias.—You have given a figure of 1s. 8d. for 1922, could you not get figures for 1921?

Mr. Schele.—I think in 1921 it was exactly the same.

President.—The trouble is that between 1923 and 1927 the question of the exchange arose in the early part of 1923 and 1924.

Mr. Schele.—That does not make any difference to us.

President.—But it would make a difference in the rupee price, 1923-24 price would be higher in rupees than now by 12½ per cent.

Mr. Schele.—What happened was that we had our matches on consignments and we sold them at a fixed price irrespective of the exchange.

President.—What I want to find out is this. This question of the exchange here in this particular instance has a different aspect from what it had in our other enquiries because in 1924 the exchange was at 1s. 4d.

Mr. Schele.—You can reduce it by 12½ per cent. If you reduce 1s. 5d. by 12½ per cent. you get the right price.

President.—The point is this, whether by the rise in the exchange from 1s. 4d. to 1s. 6d. the foreign matches did not get an advantage over the Indian matches. On these figures it would seem to be so.

Mr. Schele.—I think they got an advantage but not over the Indian because there was no competition between Indian and imported as I said yesterday.

Mr. Mathias.—If we translated this shilling price into rupees at the current rate of exchange would that be correct?

Mr. Schele.—Yes.

President.—You have not given us the price at which these were sold in the country.

Mr. Schele.—In those days we were not out here at all and we do not know what happened in the country.

Mr. Mathias.—From 1922 onwards?

Mr. Schele.—We do not know what happened at all before then. We used to sell the matches in London and what happened after that we do not know.

Mr. Mathias.—When did you start here?

Mr. Schele.—In 1922. After our sale in London it just requires adding the duty and landing charges and you get the price.

President.—Is that so always?

Mr. Schele.—Yes.

Mr. Mathias.—Your selling agents sell here after paying the duty? What price do they sell at?

Mr. Schele.—This price plus the duty. If we cleared the matches we paid the duty and landing charges, if the importer cleared it he paid the duty. In Karachi and Madras we sold on an Indent basis to various houses. We have no concern with the matches after they have left Sweden.

Dr. Matthai.—What is the price at which you sell wholesale on the Bombay side these imported matches $1\frac{1}{4}$ size?

Mr. Schele.—In Bombay full size. It is entirely sulphur. It is all sold upcountry at Rs. 2-13-0.

Dr. Matthai.—If I take your figure of 1s. 8d. and add the duty it comes to Rs. 2-10-0.

Mr. Schele.—To which you have to add landing charges half an anna, port dues, commission, then you have to add the local dealer's commission at about one anna; all these would mean another 3 or 4 annas.

Dr. Matthai.—So that on the whole you sell at Rs. 2-13-0 against the c.i.f. price of 1s. 8d.?

Mr. Schele.—Yes.

President.—Could you give us the f.o.b. price?

Mr. Schele.—No. All our prices in Sweden are c.i.f.

President.—Is there any difficulty in calculating the freight to different markets, say, Bombay?

Mr. Schele.—We do not have any f.o.b. prices. That is the business of our head office. They say "your c.i.f. price in India is so much," they say to buyers in others parts of the world "your c.i.f. price is so much" and then they arrange for the insurance and everything. I can however give you figures to enable you to calculate the freight from Sweden to Bombay.

President.—Will you please let us have it on Saturday?

Mr. Schele.—Yes. Freight for matches from Gothenburg to India is £1-7-6 less 5 per cent. per ton of 50 c.ft. measurement or weight at owner's option.

President.—And the insurance?

Mr. Schele.—12s. 7d. per £100 sterling; it comes to about .08d. per gross. It is really a very small amount.

President.—As regards matches made out of Indian wood you cannot compare Bombay, Burma and Calcutta at all because you have half-size in Bombay and half size converted into full size would be 42 per cent. less. Rs. 1-2-0 is half size and Rs. 1-9-0 full size, so that more or less they sell at the same price in Bombay, Burma and Calcutta. There is a slight difference as regards Burma. It is about Rs. 9 or 10 per case more.

Mr. Schele.—Yes, about Rs. 10.

President.—They account for it by saying that their matches are better. Is that the explanation?

Mr. Schele.—Do you mean the second quality made from Indian wood?

President.—Otherwise why should they get a higher price there?

Mr. Schele.—Because I think there is less competition.

President.—They say that in India they get a better price than the Indian matches in Madras and other places.

Mr. Schele.—Their prices are lower than anybody else.

President.—Are they?

Mr. Schele.—Yes.

President.—My recollection is they said that these matches were better.

Mr. Schele.—The matches in Madras are sold much lower. When Burma matches first came to Madras they were sold annas 4 to annas 6 below the prices of other manufacturers. I don't know why. There was no reason for that.

President.—Do the Swedish matches get better prices in Rangoon than they do in Bombay and Calcutta or is it just the same?

Mr. Schele.—I should say in Calcutta they get a better price. That is the only place where Swedish matches are still sold in any quantities on this side of India.

President.—To this Rs. 1-8-0 you have given, you have to add commission, landing charges, etc.

Mr. Schele.—They are the same as imported except in the matter of landing charges.

President.—That would mean nearly about annas 2 more and then you gave half an anna for landing charges and 9 pies for commission.

Mr. Schele.—These are our selling prices in the market. From those should be deducted agent's commission. We pay Forbes, Forbes Campbell and Company 1-2 per cent. on Indian matches.

President.—I think the best thing is to compare it with the landed price. The c.i.f. price is 1s. 8d. which is equal to Rs. 1-1-6.

Mr. Schele.—To that we have to add landing charges and other things.

	Rs. A. P.
C.i.f. 1s. 8d.	1 1 6
Landing charges	0 0 6
Importers' commission	0 0 9
London House's commission	0 0 3
Dealer's commission	0 1 6

TOTAL 1, 4 6

President.—Is Rs. 1-4-6 comparable with Rs. 1-8-0?

Mr. Schele.—Yes.

President.—Then it means that annas 3½ is the difference between foreign and Indian prices.

Mr. Schele.—Yes.

President.—As regards Assam you reduced the price to Rs. 1-3-0. Is that comparable with Rs. 1-8-0?

Mr. Schele.—No, that is half size.

Dr. Matthai.—Is there anybody else supplying the up-country market in Assam?

Mr. Schele.—Yes.

Dr. Matthai.—Who?

Mr. Schele.—Everybody else.

Dr. Matthai.—Is the competition from Bengal factories?

Mr. Schele.—Yes, Calcutta factories.

Mr. Mathias.—With regard to this note you say that you are trying to liquidate old stocks at very low prices. Is that the reason why we were informed in Burma that there was a very great cutting of prices by the Swedish Match Trust?

Dr. Matthai.—What they said was that quite recently in Mandalay you were selling matches at unconscionably low prices.

Mr. Schele.—They must have referred to that. As a matter of fact we can't get rid of these stocks. We sell them on six months' credit.

Mr. Mathias.—How many months' credit do you give ordinarily?

Mr. Schele.—We sell for cash. That is the difference between us and Adamjees.

Mr. Mathias.—You don't even give a month's credit.

Mr. Schele.—Most of our business is done on strict cash before delivery.

President.—If you take Rs. 1-6-6 as the nett, it works out at Rs. 1-8-0.

Mr. Schele.—Yes.

President.—Formerly you got Rs. 1-11-0 and you have now reduced it to Rs. 1-6-0 in Assam.

Mr. Schele.—Yes.

Dr. Matthai.—Did you have occasion to liquidate stocks at low prices on the Bombay side?

Mr. Schele.—No. This was particularly in Mandalay.

Dr. Matthai.—Because in one of the letters that we got from the Bombay side they say that somewhere in September, 1926, you were selling imported matches at Rs. 2-4-0.

Mr. Schele.—Yes, imported matches were really sold off at Rs. 2 because they were in a very bad condition and we are only allowed to keep goods in bond for three years. We could not sell them in three years. They were too bad and we had to get rid of them.

Mr. Mathias.—By putting on the market these bad matches, don't you spoil your reputation?

Mr. Schele.—It is very difficult to know what one should do. Really one should not do it.

President.—As regards Assam I think you are getting the price that you expected to get.

Mr. Schele.—We have been too optimistic.

President.—You expected to get Rs. 1-8-0.

Mr. Schele.—We didn't get what we expected. You refer to full size and we are making half size in Assam. At that time we estimated that we should get Rs. 1-8-6 at the factory. Now we get Rs. 1-1-0, so it is rather a disappointment.

President.—Then you must be selling at a loss.

Mr. Schele.—At the same time we were very conservative in estimating.

President.—So you are on the right side in that case.

Mr. Schele.—I don't know how it will turn out this year.

President.—More or less it is a local market.

Mr. Schele.—We tried to take advantage of the position of the factory. That is why we placed our factory up there in order to get the benefit of lower freights to Assam and Northern Bengal.

President.—What I mean is there is no local competition in Assam.

Mr. Schele.—Not from any factory up there, but the Calcutta factories are selling on both sides of the Brahmaputra.

President.—They ought to be at a disadvantage compared with you.

Mr. Schele.—Yes.

President.—Which are these factories that compete there?

Mr. Schele.—I should say everybody. Adamjee also competes there. He sends his goods to Chittagong and rails them up to Assam.

Dr. Matthai.—Is Esavi selling up there?

Mr. Schele.—Yes, it is only half size consumed in Assam. There is no demand for full size. This factory is meant to supply Assam.

President.—I don't think anybody reading the prospectus will see that you are going in for the manufacture of half size in Assam.

Mr. Schele.—No, he only looks at the margin of profit.

President.—One might go wrong in calculations.

Mr. Schele.—I am sorry for this omission.

President.—I think speaking generally what it comes to is this: All over India with the exception of Burma the price of full size is about Rs. 1-8-0. I think that is right. In Burma it is a little more.

Mr. Schele.—Yes, but then you have to give a long credit in Burma which is not given anywhere else.

President.—Burma is a country for long credits, not only for matches but for many other things.

Mr. Mathias.—The other factories give credit.

Mr. Schele.—Yes.

President.—With reference to your answer to question 53: the question is "Have you any reason to suppose that prices at which foreign producers sell for export to India are unremunerative?" and you say "No." That may be in your case.

Mr. Schele.—Yes. I have no business to talk of others. I merely refer to my own case.

President.—Do you keep separate accounts as regards each concern of yours in Sweden?

Mr. Schele.—No, we don't keep separate accounts. It is all one.

President.—Do they have different prices for different countries in Sweden?

Mr. Schele.—Decidedly.

President.—When you say remunerative it may mean that they average all the prices they have got for different countries.

Mr. Schele.—That is what has been done.

President.—It may be that so far as one country is concerned, the prices may be unremunerative and as regards others they may be remunerative and you may find that the average is remunerative. It is in that sense you have answered the question.

Mr. Schele.—No, I am not conversant with the details of the home finance. Why I think I am justified in saying this is that we sell at lower rates to very important markets than what we sell to India. One of those markets is England. We sell there at lower rates than what we do here.

President.—Ordinarily your head office will average that.

Mr. Schele.—Naturally. We have a profit and loss account. We have made so and so many cases of matches. We know the costs. On the other side, the receipts are so and so much.

President.—The point that is of some importance is with regard to your cost of production. Apart from the prices that you realise what we wanted to know was whether they were remunerative. You do not know what happens.

Mr. Schele.—If the Swedish company were to sell at a loss to other countries, they would not be able to do as well as they do now. We cannot pay a dividend and sell at the same time at unremunerative prices.

President.—What you may be doing is where there is competition you may sell at unremunerative prices.

Mr. Schele.—I don't think we do that.

President.—I say you may.

Mr. Schele.—I don't think so. There is some margin. If the prices are too high, competition will arise,

President.—In that case you bring down the prices.

Mr. Schele.—There is not a very big margin.

President.—Can you give us the prices of matches in Sweden itself?

Mr. Schele.—Swedes use only Swedish matches. The consumption there is very small.

President.—Why, don't they smoke?

Mr. Schele.—We are only 5 million people.

President.—They can smoke a lot.

Mr. Schele.—But not as much as 330 millions.

President.—Burma's population is only 10 millions.

Mr. Schele.—If you want the prices of matches in Sweden, I can get them for you.

President.—Yes, we would be obliged if you could get us those prices. You must I think be in touch with Japanese prices.

Mr. Schele.—No, I am not.

President.—Would you not keep yourself in touch with those prices?

Mr. Schele.—No, I don't.

President.—This is the only market where they compete against you.

Mr. Schele.—They compete everywhere but I am only in charge of India.

President.—You are in charge of India, Burma and Ceylon.

Mr. Schele.—Yes, but I don't bother about Java, Australia or any other country.

President.—Have you no information?

Mr. Schele.—I have got some information in reply to a cable for the particular purpose of this investigation.

President.—I should like to have it because it is very difficult to get accurate information as to what the import prices are.

Mr. Schele.—In accordance with my cable reply; the Japanese f.o.b. prices are as follow :—

1st quality 33 Yen for 50 gross.

2nd quality 32 Yen for 50 gross.

3rd quality 31 Yen 50 cents. for 50 gross.

Exchange is Rs. 136 to 100 Yen.

Freight to Calcutta is 4 Yen.

Freight to Bombay is 4 Yen 75 cents.

The exchange has gone up and that is another factor why the Japanese imports have gone down.

President.—It works out at one rupee per gross c.i.f.

Mr. Schele.—Yes.

President.—They sell at about two annas less.

Mr. Schele.—Yes.

Mr. Mathias.—In answer to question 53 (c) "Have you any reason to suppose that prices at which foreign producers sell for export to India are exported at a price below the lowest price current in the home market," you say "yes."

Mr. Schele.—That refers to Sweden. Sweden has no bearing on our prices. It is such a small part of it. We make 600,000 cases a year, out of which only 25,000 cases are consumed in Sweden in a year.

Mr. Mathias.—It is usual for big manufacturers to charge somewhat higher prices in their home market.

Mr. Schele.—Because their competitors are handicapped by freight and then there are landing charges, etc.

Mr. Mathias.—You can safely charge higher rates in the home market.

Mr. Schele.—Yes.

Mr. Mathias.—Do you consider the Indian market an important market so far as your organisation is concerned?

Mr. Schele.—Not now.

Mr. Mathias.—Would the loss, for instance of the Indian market seriously affect you?

Mr. Schele.—No. As a matter of fact we are losing some of it now.

President.—You have not yet. Your imports are still the same.

Mr. Schele.—We have to look at this year.

President.—You have got figures for the last 10 months.

Mr. Schele.—I am talking of 1927.

President.—Have you got more recent figures?

Mr. Schele.—Imports do not count. If I have 6,000 cases in Bombay, I am concerned with actual deliveries from godowns. They show that the prospects are not bright.

Dr. Matthai.—I gathered from speeches which were delivered a year or two ago by your managing director that India was one of your main objectives. That is rather different from what you said in answer to Mr. Mathias that the loss of the Indian market did not matter much to you.

Mr. Schele.—It did matter then more than what it does to-day. We were rather optimistic regarding India, but it did not materialize. It is not our intention to try to monopolise the Indian trade.

Mr. Mathias.—What exactly was your intention in starting in India if it was not really an important market?

Mr. Schele.—India is an important market in itself of course. Why we started was, when this duty was introduced not as protection but as a revenue measure, our Japanese competitors tried to benefit thereby by starting factories in India, by only importing matches without the tips, I mean everything else was done in Japan, only the tips were put on in their factories here. We looked on for a year and then we felt we could not hold aloof any longer. We were forced to commence manufacturing through the Indian Government's revenue policy.

Dr. Matthai.—But is not this development in keeping with your general policy all over the world for the last 15 years?

Mr. Schele.—Yes.

Equipment.

President.—As regards equipment I do not wish to ask you many questions because we would have to see the works costs before we can really ask you any questions.

Dr. Matthai.—There is just a little point about the freight. Can you give me any idea as to the ton mile railway freight in Sweden as compared with India?

Mr. Schele.—No.

Capital Account.

President.—Roughly your block value comes to about Rs. 20 lakhs for the Ambernath factory?

Mr. Schele.—Yes.

President.—That is all new machinery, is it not?

Mr. Schele.—Yes.

President.—Is the machinery in the Calcutta factory also new?

Mr. Schele.—Yes.

President.—Your building is very old in Calcutta?

Mr. Schele.—That is a rented building.

President.—So that it would be better to take Ambernath as a typical factory?

Mr. Schele.—Yes.

President.—Your capacity may be taken at 2½ millions a year at Ambernath, so that your capitalization may be taken as just under 4/5th of a rupee per gross?

Mr. Schele.—Yes.

President.—This machinery was ordered, I take it, in 1923?

Mr. Schele.—Yes.

President.—We have got Adamjee's figures, which work out at about a rupee a gross, I think. But yours of course is a complete factory—this is not complete in the sense that he has not got all the machines yet.

Mr. Schele.—That is so.

President.—Do you consider that as a fair capitalization for production in India?

Mr. Schele.—I don't quite follow why you are trying to work out the capitalization per gross?

President.—Generally we like to find out what ought to be the fair selling price of any article, so we take the works costs we get them, then we add the return on capital, and I was simply trying to get your works costs for purposes of comparison. Has the price of machinery come down since then?

Mr. Schele.—No.

President.—You must have got your machinery in the cheapest way?

Mr. Schele.—Yes, but at the same time those who made the machinery took their ordinary profits.

President.—So this would be about a fair capitalization?

Mr. Schele.—Yes.

President.—I see from your Assam prospectus that it is a little higher.

Mr. Schele.—That is because we can make more in Assam, 30 cases per day. Then again in Assam we have got our own power station. That really makes the difference. We have not got our power station in Ambernath.

President.—Would it be right to say that in India to start a factory to produce 2½ million matches you should require a capital of Rs. 20 lakhs?

Mr. Schele.—Yes.

Overhead Charges—1. Depreciation.

President.—As regards depreciation, this depreciation that you have debited, is it calculated actually on the whole block value according to the rates that you have given?

Mr. Schele.—Yes. You have that in reply to question 80 calculated at income-tax rates; one column shows on original cost and the other on depreciated value.

President.—Is this for one year?

Mr. Schele.—Yes.

President.—On machinery you take 10 per cent., don't you?

Mr. Schele.—No. 6½ per cent.

Dr. Matthai.—That is just the income-tax rate?

Mr. Schele.—Yes.

President.—This Rs. 1,47,000 is calculated at the income-tax rates?

Mr. Schele.—Yes. Everything is calculated at income-tax rates.

Dr. Matthai.—You are suggesting that the income-tax rate on match machinery is too low?

Mr. Schele.—Yes.

President.—In our previous calculations we took 6½ per cent. on the whole block value, buildings, plant and everything else.

Mr. Schele.—I think that should be a rather fair percentage to take.

President.—You work only one shift. That is a shift of 10 hours, is it?

Mr. Schele.—Yes.

President.—So 6½ per cent. would ordinarily be high for one shift.

Mr. Schele.—No. If you have double shifts you must have much higher rates for the industry.

President.—You consider that so far as machinery is concerned 6½ per cent. is too low?

Mr. Schele.—I think 10 per cent. should be the minimum. With new improvements in machinery you have to throw out your machines and replace them with more modern ones.

President.—This is what you have actually debited in your depreciation account of the Western India Match Company, Rs. 2,46,000.

Mr. Schele.—I don't mind showing you our balance sheet (shown).

President.—At present you are not carrying anything to the reserves?

Mr. Schele.—We cannot do that.

President.—But in your reserves you have got uncalled capital?

Mr. Schele.—It is not uncalled, it is authorised. We have called up the whole capital. That is all fully paid up capital. Everything that has been issued has been called up. In Assam we have provided Rs. 7 lakhs and we have issued Rs. 5 lakhs and they have all been paid up.

2. Interest on Working Capital.

President.—Your working capital in the Western India Match Company is Rs. 20 lakhs?

Mr. Schele.—Yes.

President.—Can you give me a separate figure for Ambernath?

Mr. Schele.—Rs. 10,50,000.

President.—That is because you don't allow any credit, otherwise you want more?

Mr. Schele.—Yes.

President.—This working capital represents your stock, I suppose chiefly?

Mr. Schele.—Stocks of ready matches and raw material.

President.—As regards raw materials have you got to carry long stocks?

Mr. Schele.—At present we have rather abnormal stocks.

President.—Suppose you had normal stocks both as regards matches and raw materials?

Mr. Schele.—That is how I want the position to be.

President.—Then Rs. 10,50,000 is normal?

Mr. Schele.—Yes, for Ambernath.

Mr. Mathias.—How many months production does it represent.

Mr. Schele.—About three months.

President.—You seem to do with less working capital than Adamjees?

Mr. Schele.—Yes, but he gives credit for four months which is uncalled for. The match trade never had credit to that extent, it is only Adamjees who has introduced the long credit system.

President.—I know during Mr. Lim Chin Song's time a lot of credit was allowed.

Mr. Schele.—In my opinion the whole match business in India could be done on a cash basis.

Continued on Saturday the 16th April 1927.

Introductory.

Dr. Matthai.—I don't know whether it would be possible for you to give me a statement giving the sales of stock in liquidation during the past three years at specially low prices. Do you think you would be able to do that?

Mr. Schele.—There was only one instance and that was in Mandalay.

President.—I should like to know whether you would supply us with this information. That day you gave us a list of countries where prices were lower than in India. Would it be possible for you to give us your prices in all countries in which you are operating since 1918?

Mr. Schele.—I will ask the people at home about that.

President.—I think this Company was re-organised in 1917.

Mr. Schele.—That was really the year when the combine took place.

President.—So the proper year to start with would be 1918.

Mr. Schele.—Yes.

President.—I want a list of countries in which factories have been established or controlled since that time.

Mr. Schele.—Yes.

President.—Could you let me have the prospectuses each time the capital was increased?

Mr. Schele.—You have got that already.

President.—We have only the last one.

Mr. Schele.—Yes, haven't you got the previous ones?

President.—No. In 1917 was not there any prospectus?

Mr. Schele.—I don't think so, but I will try and find out. I can get you all those prospectuses, but I doubt whether they will give you any information you want.

President.—You can make a note of it and see what you can do.

Mr. Schele.—Yes.

President.—I want for both the International Match Corporation and the Swedish Match Company.

Mr. Schele.—I am sorry I have not got them. We don't get those things out to India. I will get them for you. They will be available easily in London.

President.—As regards prices I may tell you that if your Company doesn't give it, I think we should be able to get them from the Overseas Department. I want to avoid giving them trouble. The Company must take a reasonable view of it. This is information which the Overseas Department I am sure will be able to get for us, but it is no use troubling them with that.

Mr. Schele.—I suppose why they would object to giving their prices is that if this is published and say for instance Holland finds that they pay more for their matches than Denmark, then they will probably kick up a row about it.

President.—The prices are known.

Mr. Schele.—I don't know myself what the prices are. If I sell jute from India to England and Sweden and if Sweden gets to know they pay more than England, they will probably start creating trouble.

President.—Every country has got its Customs Authorities where you must declare.

Mr. Schele.—Yes, but they don't compare notes with others.

President.—The Overseas Department can get that for us. It is no use your Company raising any objection.

Agent's Commission.

I have nothing to ask you about this question 87 regarding agent's commission. That I understand is on a fixed scale or sliding scale or whatever it is.

Mr. Schele.—It is fixed scale and we pay 1·2 per cent.

President.—On the realised prices, is it?

Mr. Schele.—Yes.

Manufacturers' Profit.

President.—In answer to Questions 91, 92 and 93 about manufacturers profit you say: "It is difficult to say as the investing public in India have burnt their fingers practically every time they have been offered to take part in a match manufacturing concern." But in any case you ought to be able to say what amount of promise of dividend would attract the capital. I think in the Assam prospectus you stated 14 per cent. as the amount to be expected.

Mr. Schele.—There we were successful. That is due to the fact that the Swedish Match Company was behind the flotation.

President.—Even with a big company standing behind, you have to offer 14 per cent. to get the capital.

Mr. Schele.—We didn't actually offer that. We simply said that would be the profit.

President.—On prospectuses you don't say here "of course I will give you so much."

Mr. Schele.—If you have a profit of 14 per cent. it doesn't mean a dividend of 14 per cent. You will have to have a reserve fund and other things.

President.—It is quite true. In your Swedish Match Company itself the average dividend paid is about 12 per cent. if not more.

Mr. Schele.—In Europe, yes.

President.—That has succeeded in attracting capital.

Mr. Schele.—Yes.

President.—In this country you are making a return of 12 per cent. on the capital invested in your Company which is a big concern. Any small man wanting to raise capital would have to offer more, is that not so? Supposing I was to invest money and I say to myself: "Here are these two Companies. This is the Swedish Match Company and this is an Indian Company. The Swedish Match Company says it can give me a return of 12 per cent. It has made a return of 12 per cent. in the past so many years." If I am to invest my money, I would rather give it to the Swedish Match Company, is it not so?

Mr. Schele.—Decidedly.

President.—Apparently the rate of return expected in the Match business is higher than in other industries. You have made it so.

Mr. Schele.—That is provided of course we were there.

President.—That is true. You are always there.

Mr. Schele.—Say that we are not.

President.—You are always here in this sense that an investor will say "If I want to invest in the Match Industry, I would invest in the Swedish Match Company, because it pays 12 per cent."

Mr. Schele.—On the present value of the shares it doesn't come to 12 per cent. but it is only 5 per cent.

President.—Because you issued them at a premium recently.

Mr. Schele.—Yes, and they are quoted higher in the market.

President.—But in the past.

Mr. Schele.—That was long ago.

President.—When you issued the prospectus in 1923, you were paying 12 per cent.

Mr. Schele.—Then also the shares were issued at a premium.

President.—Your capital has been increased by so much and now you have issued subsequent shares at a premium, is not that so?

Mr. Schele.—Yes.

President.—As your combination is new compared to what it was before, you are naturally giving 5 per cent. interest but in course of time you may be able to pay 12 per cent. if you are able to do as well as before.

Mr. Schele.—I don't think so.

President.—We can only judge by your past history. In any case in India you will have to mention that the nett profit expected was 14 per cent.

Mr. Schele.—Yes.

President.—You had to mention it.

Mr. Schele.—We have to mention the prospective return.

President.—If the Company was a good one—let me put it to you this way—well financed considering that you mentioned 14 per cent. it would have to do the same to get the money, would it not?

Mr. Schele.—I can't say.

President.—An Indian Company not of your standing would not be able to get money for less.

Mr. Schele.—I don't think so.

Dr. Matthai.—You were able to raise Rs. 2 lakhs of Indian capital in connection with the Assam Match Company.

Mr. Schele.—Yes.

Dr. Matthai.—May I know whether it would have been possible for you to get more if you had wanted it? Was it that you restricted the Indian capital to Rs. 2 lakhs?

Mr. Schele.—As a matter of fact the subscribers from outsiders were more from Europeans than from Indians.

Dr. Matthai.—Anyhow it was raised in India.

Mr. Schele.—What we did was this. We had anyhow ear-marked Rs. 3 lakhs for ourselves and we subscribed 5 times more than what we wanted. Then we took all the subscriptions which were about three times more than the capital and everybody got $\frac{1}{3}$ rd. We got $\frac{1}{5}$ th of what we subscribed and others $\frac{1}{3}$ rd of what they asked for. That shows actually that the outsiders subscribed for Rs. 6 lakhs and they got Rs. 2 lakhs.

Dr. Matthai.—So that you consider that the response to your appeal was quite encouraging.

Mr. Schele.—Very encouraging.

President.—In answer to Questions 91, 92 and 93 what do you mean here when you say: "And unless there is a distinct change for the better maintained through a number of years we do not think that capital can be obtained in the ordinary way of issuing shares even if they are 'preference'."

Mr. Schele.—I mean the public has only subscribed, because we were standing behind. I doubt very much whether we will be able to pay any dividend in the Assam Match Company. Unless there is a very decided change for the better and unless that dividend is being maintained for several years, the public won't regain their confidence in Match Companies. Suppose we have for a couple of years losses which are bound to arise if the prices don't improve over those ruling at the present moment, then everybody will be rather dissatisfied. After that confidence will be shaken to a certain extent. I would look upon the business that way if I was not

engaged in the match trade. If I had invested in tea, and I didn't get any dividend my confidence in tea companies would not be the same.

President.—I will put it to you this way. Supposing there is no provision in your Articles of Association compelling you to declare a dividend.

Mr. Schele.—No, that can't be done.

President.—Supposing you say "We shall not declare any dividend for five years so that nobody should come in." That may happen.

Mr. Schele.—How could we do that. That would not be fair to the shareholders.

President.—No, shareholders are very few. They are educated influential men and they would understand for what reason you are doing it.

Mr. Schele.—For what reason?

President.—To create the impression that the Match Industry didn't pay.

Mr. Schele.—Why should a shareholder take that line now?

President.—In order afterwards to get a bigger return. He may sit quiet for four or five years and allow the dividends to accumulate. He may get them later. It may happen that the industry may keep back, but I don't say that you do it.

Mr. Schele.—Take the Assam Match Company. How should we be able to pay better dividend by not paying dividend for some years?

President.—By lessening competition, by preventing the expansion of the industry.

Mr. Schele.—We have seen that the Match Industry in India can very easily carry on without going to the public on private initiative, because after all the capital required to cover the whole consumption in India is very negligible if you compare that with other industries. So I don't think that would work at all. Some individuals would see it through and start new match industries.

President.—You think that that can't be done.

Mr. Schele.—No. It is too easy to start match-making in India.

Dr. Matthai.—It is very difficult to start any kind of industry in India.

Mr. Schele.—But not match-making.

Dr. Matthai.—It means this. Taking your statement of about 5,000 or 7,000 gross a day as the economic unit it would require somewhere about Rs. 20 lakhs to float an enterprise in a country like India. Let me put it this way. Supposing for a period of 5 or 10 years you find that the dividend paid by Match Companies in the country has been so negligible that there is a general feeling of depression regarding match companies as a whole, that added to the usual shyness of Capital in India may mean that for a considerable period the Match Industry may make no progress in India.

Mr. Schele.—When I speak of 7,000 gross as the economic unit, you have perhaps misunderstood me a little. As far as we are concerned we have expensive machinery and European experts and with 5,000 or 7,000 gross a day, we think we can get down to low costs, but that doesn't mean that another concern with 500 gross a day cannot exist side by side with the Swedish Match Company. If a small factory makes and sells 500 gross a day, it requires less profit than a big Company with many shareholders. It happens in India that a factory on the cottage system is composed of a single family.

President.—The family also has got to live as well as shareholders.

Mr. Schele.—That is not an expensive show.

President.—That shows that if matches are to be cheaper it is better to have matches manufactured by smaller people.

Mr. Schele.—No. The big factories have the lowest prices, but that does not mean that small men cannot exist side by side with the big factories.

Dr. Matthai.—That is a temporary feature. The moment the match business is established and there are big factories turning out matches on a large scale, you will find that the small factory gradually disappears.

Mr. Schele.—Not unless the big fellow is intent on driving out the small fellow. Take any industry in any country. Take the case of England. If you go to a small town, you will find a small factory, but you will not find that in London or Manchester.

Dr. Matthai.—What kind of factory are you thinking of?

Mr. Schele.—All kinds of industries. You will find small factories in small towns. If you go to big industrial centres you will find factories working 10 times bigger.

Dr. Matthai.—If you take a textile factory you will find very often that the products turned out by the small scale business are somewhat different. A local specialised demand might keep a small scale industry going but where the small industry is turning out precisely the same kind of product as is turned out by the large scale industry it has much less chance of surviving. That is what might happen conceivably in the match industry.

Mr. Schele.—I am afraid you know more about those things than I do.

Mr. Mathias.—Unless the market served by the small factory is so remote that it is not worthwhile for the big factory to take it up.

Mr. Schele.—That really happens in the case of Japan. Suppose there is a small factory in the north of the Punjab. I think that it can exist because there is not the same high railway freight. The factory down at Bombay has to pay about 4 annas per gross to move their matches up to the north Punjab.

Mr. Mathias.—In which case the prices of the big factory would be higher.

Mr. Schele.—Yes, about four annas higher.

Mr. Mathias.—Supposing there are small factories, the limit of high prices which would be demanded by big factories would be restricted by the small factories.

Mr. Schele.—Yes, but they would compete between themselves very easily. We have a factory in Ahmedabad. We have another in Lahore which is the only factory that makes three quarter size for which there is a demand in the Punjab. As far as I can see the Lahore factory prices ought to be very high. We don't sell anything up there. All the same the prices are very low because the two factories compete.

Claim for Protection.

President.—You say in reply to question 94-A “No natural advantage except a large home market. Power is of small consequence in match-making.” Surely you don't mean that. You want to establish this industry in India because it does possess natural advantages.

Mr. Schele.—I think that with a protection of 200 per cent. you can get any industry in any country.

President.—I think that you yourselves in the prospectus somewhere have stated that it is a good proposition. You say that being satisfied as a result of experiments made during the last few years the manufacture of good matches in India is a sound commercial proposition.

Mr. Schele.—That is of course taking the tariff into consideration.

President.—Take the Indian matches made out of Indian wood. At present you find the competition very keen. Does not that show that there is some natural advantage? After all what natural advantage have you in Sweden when you bring your logs from Finland very largely?

Mr. Schele.—First of all, we are close to the match wood.

President.—Take the case of Burma.

Mr. Schele.—I don't think that wood is good in Burma.

President.—Supposing we decided that the wood was good—you admitted the other day that the matches were good—and supposing that wood could be produced in the country economically

Mr. Schele.—That would of course alter the matter altogether if there is wood close to the factory which can be used economically.

President.—There is just now.

Mr. Schele.—I don't think so. Anyway that is not our experience in Burma. I am very sorry to have to be pessimistic. Our experience there has been extremely disappointing. It is very unpleasant for me not to be able to talk to you in an optimistic manner.

President.—I don't wish you to talk in an optimistic way. We can only go by the evidence before us. Adamjee's have given evidence to show that as far as they are concerned the supply of wood has been assured for 15 years and that the supply will continue.

Mr. Schele.—We can only go by our experience. I would draw your attention to the fact that apparently a very large proportion of the wood for Adamjee has to come from the Andamans.

President.—Not a very large proportion. Even then the Andamans are in India.

Mr. Schele.—That throws a funny light on these abundant forests in Burma proper.

President.—There is no question that the forests of Burma are very rich and abundant. The only question is whether upon the present basis they can get very large quantities. They are considering the question of plantation.

Mr. Schele.—If plantation pays, if you have a country full of match plantations which are done at economic rates, I would certainly say that it is a glorious country for match-making provided the wood is suitable for producing matches.

President.—Quite true. We have shewn you the woods that they have in Burma.

Mr. Schele.—If you could get them in bulk.

President.—In that case India will have a great natural advantage.

Mr. Schele.—If there were abundant supplies, it would certainly be looked upon as a natural advantage. I must say that so far as plantation is concerned, it is not a natural advantage.

President.—Your experience in Burma has been not as good as Adamjee's.

Mr. Schele.—Or rather we are more inclined to face facts than others.

President.—In your case it is not necessary for you to buy Indian wood because according to your own statement you get your wood from your own forests. There is not much incentive for you to use any Indian wood as far as I can see.

Mr. Schele.—We use Indian wood for boxes because it is cheaper.

President.—I am talking of splints.

Mr. Schele.—If Indian wood is cheaper for splints, we will use that too.

Mr. Mathias.—So far as boxes are concerned, would you admit that India has a natural advantage?

Mr. Schele.—I doubt very much whether supplies would be sufficient. If it was guaranteed that supplies would be maintained for, say, 15 years, I would say that there was natural advantage.

President.—There is a case in Burma.

Mr. Schele.—Not in our experience.

President.—What I am trying to point out is that so far as timber is concerned you land in Bombay from your own forests in Sweden apparently

at very low rates and that therefore you are not under the same incentive to explore Indian wood as Adamjee Hajee Dawood.

Mr. Schele.—He can also land at the same rate.

President.—If he could find wood in Burma, he would get it cheaper.

Mr. Schele.—If we find Indian wood cheaper, why should we import?

President.—Your biggest factory is in Bombay.

Mr. Schele.—We are also in Rangoon.

President.—It is not necessary for you to manufacture matches in Rangoon. You can manufacture them in Bombay.

Mr. Schele.—You know what the freight is on matches. We have to be near the markets. That is why we have a factory in Rangoon to cater for that market.

President.—Your conditions are not as bad as those of a manufacturer in Burma. Your biggest concern is in Bombay, is not that so, where you can depend on your own forests.

Mr. Schele.—Another thing is that Aspen in Rangoon is not more expensive than in Bombay.

President.—It is expensive compared to the wood that he is getting now.

Mr. Schele.—The same holds good in Bombay.

President.—In Burma it is cheaper for him to use Burma wood than to use Aspen.

Mr. Schele.—I am not so sure.

President.—That is his case. I am trying to point out to you what we have been told.

Mr. Schele.—I think he is wrong there. I am of opinion that he will get better price and more production. That is why we imported Aspen last year and made experiments.

President.—Anyhow that is his case. It is cheaper for him to get Burmese wood at Rs. 35 to Rs. 40 than to pay Rs. 150 for Aspen in Rangoon as he was doing before.

Mr. Schele.—It is our case as well in Rangoon.

President.—It is more advantageous for the country at large to use Indian wood. Although as you say if he used Aspen he made it up by the extra price, yet from the point of view of the country he is using Indian wood and producing matches cheaply, the country has the benefit of cheap matches.

Mr. Schele.—If the standard is not lowered.

President.—The matches shewn to you are all of good quality.

Mr. Schele.—They are not. It is a very small advantage to the country if you consider what the Forest Department will make in the shape of royalty on that extra quantity for splints.

President.—You have extra royalty.

Mr. Schele.—I have calculated that the average royalty that would be paid if all match factories used exclusively Indian wood be only 1½ lakhs. If the consumption in India is as you Mr. President worked out about 20 million gross, it would mean Rs. 30 millions revenue if there were only imported matches used in the country. I say that Rs. 3,00,00,000 would be of much more benefit to the country than trying to keep an industry which has really no business to be in the country. That is how I would look upon it as a tax-payer.

President.—There are other ways of looking at an industry.

Mr. Schele.—Why should one bolster up a thing which can never be a success.

President.—Why not?

Mr. Schele.—I consider that the match industry will not be a success in India.

President.—You have yourselves started it.

Mr. Schele.—That is a mistake.

President.—Is it your mistake?

Mr. Schele.—Yes.

President.—That is another matter.

Dr. Matthai.—Don't you think that it is rather unsafe to base any conclusion with regard to the future of a big industry like the match industry on three years' experience.

Mr. Schele.—I am thinking of this internal competition that will apparently always exist in this country. It is easy to make bad matches but it is very difficult to make high class matches. That is the reason of our supremacy all over the world. In other countries we have been invited to come in and put their match industry on a proper footing.

Dr. Matthai.—I don't question that at all. The existence of a number of small factories is an inevitable feature in the beginning. Ultimately a time will come when the large factories will practically have the field to themselves and that is the stage when you will find over-production will begin to disappear. You and two or three others producing on a really economic basis will be the only people left. With the present over-production unhealthy competition is inevitable and on that I would not base a pessimistic conclusion.

Mr. Schele.—I am very glad you say this, because that is really what is unreasonable about the present complaints. Those who are equipped with bad machinery, insufficient capital, insufficient experience are causing this present confusion. I quite agree with you when you see a future in India when these people who are not fit to make matches should cease to exist, only the big factories remaining, that would be a much more attractive proposition. But that is of course an optimistic view.

President.—It is not any more optimistic than the prospectus of your company!

Mr. Schele.—One has to be optimistic in prospectuses.

President.—That may be so. That is the history of all industries, that when production has succeeded it must lead to a certain amount of over-production for a little time and things will settle down.

Mr. Schele.—Unless you get big combines I think you will find that no industry will ever settle down.

President.—Combine is a post-war invention altogether in this country.

Mr. Schele.—You mean India?

President.—Yes.

Mr. Schele.—Unless you get big companies in combine who work together to get the same selling rates and sell at the same price and who will not enter into unfair competition, you will always have trouble.

President.—It remains to be seen how long they are going to continue.

Mr. Schele.—There must always be some co-operation among people engaged in the same occupation.

President.—The whole case is briefly this, does the industry at present require protection against foreign competition? You yourself say it does. The question in that case is, what protection does it require? That we are enquiring into and on that point, I think, we have not received sufficient assistance from you as to what protection it requires.

Mr. Schele.—Would you mind pointing out the points where I have not given satisfaction?

President.—Costs, and cost is the basis of our enquiries.

Mr. Schele.—When you have got other costs from other factories in November, I may be able to help you after consulting my head office when

I go to Sweden. The enquiry is now at a preliminary stage; when we both come back from Europe, it is very likely I may be able to satisfy you on this point.

President.—I am talking of the present position.

Mr. Schele.—Personally I have no objection at all to give it to you. Why I don't do so now is because after all I am responsible to the higher authorities.

President.—We shall revert to it once more. I should just explain to you that the costs are necessary so far as we are concerned. Then we have got to consider whether the industry would eventually be able to do without protection. On that point you say "No" and the reason for that is that in your opinion the industry is not economically organized.

Mr. Schele.—Yes. It will never have the same advantage as the industry in Sweden. That is my honest opinion. My reason for saying this is that the advantages for the match industry in India will never be as good as the advantages in Sweden.

President.—That may be so, but you can say that of any country in the world to-day so far as the match industry is concerned.

Mr. Mathias.—In giving that reply have you taken into consideration the factor of freight on Swedish matches?

Mr. Schele.—Certainly.

Mr. Mathias.—And also the 10 per cent. duty?

Mr. Schele.—I have not taken that into consideration.

President.—The point arises in this way. You will admit that no country in the world to-day can carry on business as successfully as you because you have done it for a very long time. But so far as India is concerned, supposing there was nobody else in the field except yourselves here for making matches or importing matches here and Government say "we want a revenue of Rs. 1-8-0". Your matches are being sold in the country to-day with the duty at Rs. 2-10-0.

Mr. Schele.—Yes, for full size.

President.—That is the price at which India would get its matches if there was no competitor. But to-day India is able to get its matches at Rs. 1-10-0. Can't we say then that it is not necessary for India to be as well organized as yourselves when with all your organization you are not able to sell your matches at below Rs. 2-10-0.

Mr. Schele.—You don't pay us Rs. 2-10-0.

President.—I am speaking as a consumer: why should the consumer pay you Rs. 2-10-0.

Mr. Schele.—The consumer does not pay Rs. 2-10-0 to us; he pays Rs. 1-8-0 which goes to Government and Rs. 1-2-0 to us. It is up to the consumer to say "I am a tax-payer, I pay Rs. 1-8-0 to the Government, what do I get in return"?

President.—I am not discussing the question of revenue policy. I am speaking from the point of view of the country.

Mr. Schele.—You cannot criticise me for having a price of Rs. 2-12-0. That is not our price; that is the price in India after the duty has been added.

President.—Your having come into the country does not make matches cheaper. I am suggesting to you that with all your organization and everything else the consumer in India will not get his matches under Rs. 2-10-0.

Mr. Mathias.—Let me put in this way. Your price is Rs. 1-4-0 without duty?

Mr. Schele.—Yes, but including landing charges, agents' commission, etc.

Mr. Mathias.—We must assume that the general level of revenue duty is 10 per cent. We must assume that in any case, whatever happens, whether

this industry requires protection or not, this 10 per cent. duty means an addition of 2 annas which brings your price to Rs. 1-6-0. Do you consider it impossible that the Indian manufacturer will be able to produce matches at Rs. 1-6-0 or even lower?

Mr. Schele.—We were talking about the full size. Rs. 2-10-0 is not our price. We sell at shillings 1/6 and in some ports at shillings 1/8 and we make a profit on the sales.

Mr. Mathias.—I am talking of the price with a fair return of profit in each case. If you can sell at Rs. 1-6-0 with a fair return of profit do you think it would be impossible for the Indian manufacturer in course of time to produce good matches at that price with reasonable profit? You have very large experience as match manufacturer. You have seen how costs have gone down during the last four years.

Mr. Schele.—I will put it this way. If you take the cost of production in Japan, Sweden and other match manufacturing countries and add reasonable profit and freight to India, and then compare that with the prospective Indian price with the addition of a reasonable profit, the Indian price, in my opinion, will always be higher.

President.—Would you not allow for the 10 per cent. duty?

Mr. Schele.—I don't think 10 per cent. duty would cover the difference; for argument's sake we may say that 25 per cent. will cover the difference.

Mr. Mathias.—So that roughly what you say is that, if imported matches can be sold with the 10 per cent. duty at Rs. 1-6-0, Indian matches will not be able to sell at a profit at much lower than Rs. 1-8-0?

Mr. Schele.—That would mean that the importer to-day had only a certain profit, but we do not know what is the margin of profit outside India. He may be making 5 per cent. or 50 per cent.

President.—We can only go by the import price. We have no means of finding out whether you are making any profits or not.

Mr. Schele.—Exactly except that we can assure you that we are not making a loss.

President.—Therefore we cannot assume that you would go on reducing the price and incur loss.

Mr. Schele.—That is out of the question.

President.—Therefore we must assume that at present Rs. 1-4-0 c.i.f. is about the price at which you can sell without a loss?

Mr. Schele.—That is the lowest price which the exporter is willing to quote, that is how I would put it.

President.—If we take that as the price then, as Mr. Mathias has pointed out, with a 10 per cent. revenue duty it will come to Rs. 1-6-0. If Indian matches can sell at Rs. 1-8-0 they are not very far out and therefore they can do without protection, isn't that so? These figures suggest that if they can come down to Rs. 1-6-0 they will do without protection and therefore at Rs. 1-8-0 they will require perhaps 10 per cent. more.

Mr. Schele.—That is so. My only reason for putting it that way is that I do not want it to be put on record with the Government of India that in 1927 I said that the Indian match industry would be able to hold its own without protection, when I don't believe it.

Mr. Mathias.—We are not talking of the present at all. We are talking of the distant future.

Mr. Schele.—Even in the distant future I don't want it to be said that in the year 1927 I said this.

President.—Is it not reasonable to expect that if with the revenue duty the Indian manufacturer is, say, within 2 annas of it now, then in 10 or 15 years' time he will be able to hold its own?

Mr. Schele.—I don't think it is unreasonable.

Dr. Matthai.—Apart from these figures, if you take the cost of production in Japan and Sweden and add to that a fair margin of profit, freight and revenue duty of 10 per cent., even then do you think there would be a margin of about 20 or 25 per cent. still.

Mr. Schele.—I was saying that for argument's sake. I have that idea in my mind and I think I am justified in saying that.

Dr. Matthai.—I would like to know what you precisely mean. Do you mean that even then there would be a margin which would take many many years to cover. Is that your point?

Mr. Schele.—Yes, because once you come to a point which is favourably low, it takes a long time to come down lower.

President.—Supposing the Indian fair selling price is Rs. 1-8-0 then in 10 years' time would it be too much to expect it to come down by another 10 or 15 per cent.?

Mr. Schele.—All this is guess work.

President.—This is not guess work. You had not the figures when you wrote your reply. I am giving you the figures. Take them from me.

Mr. Schele.—I had not those figures when I replied to the question.

President.—Supposing for the sake of argument to-day the fair selling price is Rs. 1-8-0 and the foreign matches can be sold at Rs. 1-6-0, then there is a difference of about As. 2.

Mr. Schele.—Our price of full size matches is 1s. 7d. to 1s. 8d.

President.—We compared Rs. 1-4-6 with Rs. 1-8-0.

Mr. Mathias.—You have to add 10 per cent. on that. It comes to Rs. 1-6-0.

Mr. Schele.—Yes, were we not then talking of half size?

President.—No, full size. Supposing we found that the fair selling price ought to be Rs. 1-8-0 for full size Indian matches then the difference is only As. 2. Then we say "all right, let them have As. 2 just now." But we think in ten or fifteen years' time the cost will come down by As. 2 or As. 3, would that be unreasonable?

Mr. Schele.—That depends on what factory you are taking.

President.—We will take a fairly well equipped factory, e.g., Adamjee's.

Mr. Schele.—I would say he ought to come down. His prices are very high. The factory is very badly organised at present. If you take Esavi Match factory, I would say that prices have come down to the rock bottom. 10 years would make no difference in their case. Probably in 10 years their prices would go up, because Indian Factories don't look after the machinery as we do.

Mr. Mathias.—Is their price below Rs. 1-8-0?

Mr. Schele.—They sell much higher. They are making bigger profits.

Mr. Mathias.—There is one other small point. You said yesterday that the price of aspen had fallen considerably in Sweden.

Mr. Schele.—Yes, whereas it has really gone up in the case of Japanese aspen.

Mr. Mathias.—Have you any reason to expect that it would continue to fall?

Mr. Schele.—I can't say, because I am not conversant with that.

Mr. Mathias.—If there are no plantations for aspen, taking a long view, do you think that the price of aspen would go up?

Mr. Schele.—I will say more about that when I come back. In Russia you have got tremendous supplies of aspen. As you know Russia is disorganised at present.

Mr. Mathias.—When it is organised, it becomes a State monopoly and the price may go up.

Mr. Schele.—I have no knowledge of that. It doesn't interest me. I get my aspen out here and make my matches. I have given you my c.i.f. prices. I don't think I am entitled to speak more on this.

Mr. Mathias.—As has been said in some papers owing to an enormous increase in the production of matches, the supply of aspen—as also of soft wood for paper—is likely to be exhausted in the next 10 or 12 years. If that is so, the price of imported matches might go up.

Mr. Schele.—If that theory should prove correct, it stands to reason that the imported matches might be very expensive.

Mr. Mathias.—May I put it to you this way? Even if there is a slight chance of the supplies of aspen becoming exhausted or of any monopoly control being obtained over that, it would be from the national point of view desirable to develop the use of Indian wood for the manufacture of matches. Not only in India, but in any country where there are at present big supplies which may be used for matches and where there are any prospects of plantation, it would be a sound proposition to develop those sources of supply rather than to depend on aspen wood imported from Sweden or Russia.

Mr. Schele.—That is a general principle to be adopted in the case of any article where the supplies may become short.

Mr. Mathias.—You will agree to that general principle.

Mr. Schele.—Nobody can argue against it.

President.—It is your principle also.

Mr. Schele.—Yes.

Mr. Mathias.—You would be able perhaps when you come back to give us more information about the supply of aspen.

Mr. Schele.—I would look into it. I know that they take a very optimistic view of it at the Head Office. I think it is mentioned in Mr. Kreuger's speech in London of which I have given you a copy. What he has said there is naturally the correct position. I don't remember exactly what he said. I think he gave very definite assurances.

Mr. Mathias.—Is aspen used for any other purpose besides match-making?

Mr. Schele.—Not in Sweden, because we have got so many other soft woods which can be used for pulp, paper case boards, etc.

Mr. Mathias.—It is not used for any big industry like the paper industry.

Mr. Schele.—No. They use pine wood for paper.

Mr. Mathias.—Have you any reason to suppose that as the sources of the supply of aspen are getting more and more distant, the cost of extraction would become larger and larger?

Mr. Schele.—No, I don't think so.

Mr. Mathias.—Why is that?

Mr. Schele.—Because those forests are close by big rivers. When it comes to floating, the length of the floating doesn't count.

Mr. Mathias.—It is all water transport.

Mr. Schele.—Yes.

Mr. Mathias.—Does that apply both to Russia and Sweden?

Mr. Schele.—Yes.

President.—With reference to your answer to question 95 (b) the question is—"Do you claim that it is probable that in course of time the whole needs of the country could be supplied by the home production" and you say: "No, unless protected to the extent of a prohibitive duty". That, I think, you will modify now. The duty will not have to be prohibitive on the figures I have given you,

Mr. Schele.—That depends on what you call a prohibitive duty.

President.—Then what do you call 'a prohibitive duty'? A protected duty of 100 per cent. may be prohibitive but a revenue duty of 200 per cent. may not be prohibitive, and here it is not as much as that.

Mr. Schele.—Of course this is only a theoretical reply.

President.—Now we are coming to the practical aspect of the question.

Mr. Schele.—Even now it is a theoretical reply as I have tried to explain my views on the first occasion when I was asked. It depends exactly on how much share of the total consumption the local industry requires. If you require 100 per cent., you must go to the length of more sacrifices than if you require 90 per cent. You said for instance if a merchant in a village would like to cover the whole consumption in that village, he would have to sell his products at the lowest price in order to achieve his object. There would always be some people who are willing to pay a high price for their matches. My contention is that there would always be a certain percentage, say $\frac{1}{2}$ or 1 per cent. in India who are willing to pay a higher price in order to get the imported matches. That is why I have given that reply.

Dr. Matthai.—It is purely a theoretical reply.

Mr. Schele.—Yes.—For instance there are a lot of British people who take special measures to get Bryant and May's matches out here. It is a very small percentage. I would say it is perhaps 0.2 per cent. of the total population and they pay very high prices for their matches.

President.—We don't take faddists into account. We would say, "If you do 90 per cent., you have done well".

Mr. Schele.—Then the word 'prohibitive' goes out.

Dr. Matthai.—What you practically say is this that unless you legally prohibit the importation of matches, there will always be a small number of people who will pay a higher price for matches. We are concerned with the bulk of the country's demand.

Mr. Schele.—The whole thing then comes in a different light.

President.—You have not said anything about the claim for protection, but I find in your Director's report (which you have not signed, but which Mr. Best has signed) the following sentence:—

"At the same time as your Directors hope that due consideration will be given to continued protection in view of the inherent natural difficulties which exist for this industry in India, they trust that some arrangement can also be made to prevent the existing overproduction of matches".

Leave alone the question of overproduction. This Company is in favour of the continuance of this duty, is that right?

Mr. Schele.—It must.

President.—I am asking you whether you abide by that or not.

Mr. Schele.—Yes, as a Managing Director of the Assam Match Company. How can I go against it?

President.—So far as this Company is concerned, do you think that protection should be continued?

Mr. Schele.—Absolutely, otherwise we would have to fail our shareholders to a great extent.

President.—Then you talk of overproduction. I shall deal with this when I come to the Assam Match Company. One of the questions that we have got to consider is that since you and others have been manufacturing matches in the country, there has been a considerable drop in Government revenues. When Government put on the duty, it never thought of anything else except its own revenues. They budgetted at the rate of Rs. 1-8-0 per gross on imported matches for a revenue of Rs. 1½ crores. Now that revenue is steadily

going down and it must go down if production increased in the country, is it not?

Mr. Schele.—Yes.

President.—Then we may have to consider how that revenue is to be made good whether by increasing the duty on the imported materials or by levying an excise duty. Assuming that this revenue duty of Rs. 1-8-0 was to be continued and we came to the conclusion that the loss to the revenue amounted to Re. 1 a gross then in order to keep the position the same, that is to say a difference of Rs. 1-8-0, we may have to suggest an excise duty of Re. 1. I am only putting this to you as an argument.

Mr. Schele.—I quite understand.

President.—And the Customs duty will have to go up to Rs. 2-8-0 to maintain the difference and to give you the protection that you want.

Mr. Schele.—I would not say that. I have not mentioned any particular figure.

President.—Assuming that Rs. 1-8-0 is the amount of protection required.

Mr. Schele.—Yes, assuming that, it stands to reason.

President.—The excise duty will be Re. 1 and the import duty will go up to Rs. 2-8-0.

Mr. Schele.—Yes, otherwise you don't keep the balance.

Levying an Excise Duty.

President.—How do you suggest that the excise duty should be levied? I want to know your experience. You have plenty of experience of excise duty in other parts of the world.

Mr. Schele.—I am afraid I have not got much experience in other parts of the world.

President.—Your Company must have it.

Mr. Schele.—My Company's experience is not exactly mine.

President.—Have you no experience at all of how the excise duty is levied in other parts of the world?

Mr. Schele.—I know superficially. I know for instance that some countries have stamps on each box. They just count them in the factories and they have to rely on the excise staff.

President.—I am asking you what is the simpler method. So far as India is concerned considering that there are so many of these smaller factories, which would be the easier method both for the Government and for the manufacturer?

Mr. Schele.—I would say decidedly the easiest would be to have stamps, but even then I don't think it would work.

President.—What is your reason?

Mr. Schele.—It is very easy. If any one wants to infringe against the rules, he may take it into his head to forge the stamp.

President.—We must presume that there is no forgery of stamps.

Mr. Schele.—Matches may be sold without stamps largely in remote villages.

President.—It only requires supervision on the part of the Customs Authorities.

Mr. Schele.—It is a very big thing to supervise.

President.—Supposing no matches were allowed to be sold in the country unless each box had a stamp on it, then how could any match box be sold?

Mr. Schele.—If you were sure that there could be no forgery of stamps, it would be rather a good thing.

President.—We must assume that there will be no forgery. Is there any other fraud that you are thinking of?

Mr. Schele.—Anybody handling matches without stamps on them should be subject to a very heavy fine.

President.—That would be so.

Mr. Schele.—Then those stamps should be obtained only from the Government Stamp Department.

President.—Yes, that would be so.

Mr. Schele.—If these things were assured I don't see how anything could happen. That is what they do in Greece, where every box has got a stamp. There are special machines for that purpose. It is quite cheap to put that on.

President.—You can put the stamp on as you make it.

Mr. Schele.—No, it has got to be done separately.

President.—It is not a costly process.

Mr. Schele.—No.

Mr. Mathias.—Do they manufacture in Greece on a large scale?

Mr. Schele.—They don't manufacture at all. They get all their supplies from the Swedish Match Company.

Mr. Mathias.—It is your factory that puts on the stamp?

Mr. Schele.—Yes.

Mr. Mathias.—Do you purchase your stamps from Greece?

Mr. Schele.—We make them now.

Mr. Mathias.—You pay for them, don't you?

Mr. Schele.—We sell the whole thing to Government. It is a Government monopoly. They do the distribution.

Mr. Mathias.—It is not really an excisable article strictly speaking.

Mr. Schele.—It is a tax on the population. The price is increased.

Mr. Mathias.—It is a tax. But it is not an excise tax on the manufacture.

Mr. Schele.—No, you are right.

President.—The same procedure can be introduced in the country itself. Is there any objection to that?

Mr. Schele.—No, as long as you make it fool proof.

President.—So far as your big production is concerned, I suppose there would be no difficulty.

Mr. Schele.—No.

President.—Everybody who wants the stamps will have to go to the post office or some other place and get them.

Mr. Schele.—Yes.

President.—Do you think that there will be any difficulty in detecting the fraud in a *panwalla* or *biriwalla* shop? They will have some special inspecting staff to see whether the matches sold in those shops contain labels.

Mr. Schele.—I think that everybody will have his name on the label of the match showing that it is his match, and if you levy a very heavy fine on persons dealing in matches without stamps, the manufacturer will take jolly good care to see that no matches leave his factory without stamps. If you go to a *panwalla* and find that a match box is without a stamp, you must see whether the stamp has been affixed or not, or whether the stamp has just come off, etc.

President.—You must assume that the whole thing will be reasonably carried out.

Mr. Schele.—Yes.

Mr. Mathias.—Do you think that there is a possibility of the evasion of the Customs by matches being sold in bundles? They could strike them on old boxes,

Mr. Schele.—No.

President.—That could be stopped when it happens.

Mr. Schele.—Yes.

President.—Do you think that each label must contain the name of the manufacturer or do you suggest that labels should be registered?

Mr. Schele.—That is my idea. All manufacturers should register their labels.

President.—Then, of course the manufacturers will take good care to see that the boxes do contain the labels.

Mr. Schele.—So it seems to me.

Organisation of the Swedish Match Company.—Capital.

President.—The Swedish Match Company, I understand, was started about 1917-18.

Mr. Schele.—Yes, in its present shape and under that name.

President.—Before that I take it that the parent company was the Jonkoping and Vulcan Match Company.

Mr. Schele.—You cannot call that a parent company. There were two distinct groups, viz., United Swedish Match Factories formed in 1913 and the Jonkoping and Vulcan Match Company formed in 1903.

President.—There are altogether about 20 factories.

Mr. Schele.—There were more.

President.—One group was absorbed by the United Swedish Match Factories and the other by the Jonkoping and Vulcan Match Company.

Mr. Schele.—Yes.

President.—When were these two companies amalgamated?

Mr. Schele.—In 1918.

President.—They were competing against each other and then they came to an understanding and formed the Swedish Match Company.

Mr. Schele.—Yes.

Dr. Matthai.—Why do you call it a Match Company? It has nothing to do with the actual manufacture of matches.

Mr. Schele.—The Swedish Match Company is running the whole business.

President.—The United Swedish Match Factories and the other Company have a number of subsidiary factories, with regard to which the Swedish Match Company does the buying and selling.

Mr. Schele.—The factories sell their products to the Swedish Match Company and the Swedish Match Company sell the products to the outside world. The Swedish Match Company also buy materials and sell to the various factories.

President.—Since 1919, the position has been that there is no independent company in Sweden at all.

Mr. Schele.—No.

President.—The whole thing is now under the Swedish Match Company.

Mr. Schele.—Yes.

President.—The capital of the Swedish Match Company was only 3 million crowns up to 1916.

Mr. Schele.—Yes.

President.—In 1917, it went up to 6 million crowns.

Mr. Schele.—“Prior to 1918 the above statement represents the position of the Jonkoping and Vulcan Match Manufacturing Company only”. That is just one group because they have not been able to consolidate the figures.

President.—The United Swedish Match Factories Company have already come in in 1917.

Mr. Schele.—It is all one now.

President.—From 6 million crowns in 1917, the capital went up to 45 million crowns in 1918.

Mr. Schele.—No, that is wrong.

President.—When did your capital become 45 million crowns?

Mr. Schele.—When they all combined.

President.—That was in 1918.

Mr. Schele.—Yes.

President.—In 1918 you definitely raised the capital to 45 million crowns.

Mr. Schele.—It was always in existence before.

President.—Was it?

Mr. Schele.—Yes, and even more. Some of these factories were over-capitalised. Probably we had in the Swedish Match Company 100 million crowns before the very first amalgamation.

President.—Then the capital was again increased in 1923. It became 90 million crowns.

Mr. Schele.—Yes.

President.—That was issued in Sweden only.

Mr. Schele.—Part of it was issued in London also.

President.—In 1924-25 you have added another 90 million crowns, thus raising the capital to 180 million crowns.

Mr. Schele.—Yes.

President.—This year again the capital has been raised by another 90 million crowns.

Mr. Schele.—Yes, that makes 270 million crowns.

President.—In the meanwhile you started the International Corporation. That was done in 1923.

Mr. Schele.—Yes.

President.—What they did then was that the Swedish Match Company transferred their holding of about 15 million crowns to the International Match Corporation in 1923, is that correct?

Mr. Schele.—I do not know much of these things. That really is outside my sphere. I don't think I am justified in speaking on matters I do not know about. But this is a question on which I may be able to get more information for you. I think the "Financial News" and the "Financial Times" in London write very explicitly about our concern and if you refer to these papers you will find all that you want. As it is, everybody in London knows everything about the Swedish Match Company.

President.—It is rather a pity because I wanted to understand from an expert as I find it very difficult to follow the history of this company. As far as I can see. The Swedish Match Company was the parent company in this case and it floated this other company that was floated in America, was it not?

Mr. Schele.—Yes.

President.—And in that the Swedish Match Company has a controlling interest: it owns a majority of shares?

Mr. Schele.—Yes.

President.—What are the arrangements as regards the working of the Company?

Mr. Schele.—As far as I can see the International Match Corporation are running our American interests.

President.—In the Far East also?

Mr. Schele.—That is probably a financial arrangement.

President.—You say in the Prospectus "In the Far East the International Match Corporation has already secured the control of some very important match factories and negotiations for an extended influence in the match business in that part of the world are progressing in a satisfactory manner."

Mr. Schele.—Apparently it has been found opportune from the financial point of view to let the International Match Corporation finance the purchases made in the East and the Far East.

President.—And in America and Canada also. In Canada they bought a big company, did they not?

Mr. Schele.—Yes.

President.—The Swedish Match Company, I take it, operates chiefly in European countries and India, Burma and Ceylon?

Mr. Schele.—Also America, Australia, South America, East Africa—I should say almost all the world over. This is a financial arrangement. You must remember Sweden is a small country of five million people; you can't raise much money in Sweden, and this is the way of interesting American investors who have got very large amount in our concern. That is the whole thing.

President.—I want to know whether this company operates or whether the Swedish Match Company operates.

Mr. Schele.—As far as I can see the International Match Corporation covers America and Canada and apparently the Far East which is Japan and China.

President.—And the Swedish Match Company takes the rest of the world. That is what it comes, does it not?

Mr. Schele.—Yes.

President.—It really comes to this then, that the Swedish Match Company itself controls the whole of the world.

Mr. Schele.—Not controls but has a leading part.

Dr. Matthai.—You account for about two-third of the world's consumption.

Subsidiary Companies.

President.—Now, the Swedish Match Company has got a controlling interest in the International Match Corporation, and when companies are floated in other parts of the world, I understand that ordinarily the Swedish Match Company keeps also a controlling interest in the subsidiary companies. Is that correct?

Mr. Schele.—We just give them the benefit of our experience.

President.—Wherever any company is floated in any part of the world in which the Swedish Match Company is interested, it has a controlling interest. That is to say it generally owns a majority of shares and thereby a majority of voting power.

Mr. Schele.—It is very difficult for me to answer that. I am not conversant with the details of working of our head office at Home because I have been out of Sweden for nearly four years.

President.—This is what I gather. You will get a copy of this evidence and you can make any corrections you like. I am simply trying to understand the position. What I make out from the prospectus is this: first of all the average nett profits earned by the Swedish Match Company Jonkoping and the Vulcan Match Company during the last 21 years have been 25 to 17 per cent. on common stock. That is correct I suppose?

Mr. Schele.—It must be if it is in the prospectus.

President.—And in none of the last 17 years has the nett profits been less than 17 per cent. The average dividend rate during the last 21 years has been over 9 per cent. per annum and during the last 11 years it has been 11.17 per cent. per annum. In addition to that the International Match Corporation is said to have made a nett profit in 1921 of 3.6 million dollars or sales of 14 million dollars in 1922, 3.6 on sales of 15 million dollars in 1923, 3.9 million dollars on sales of 16 million dollars and in 1924, 4.8 on sales of 20 million dollars. That profit is in addition to the profit of the Swedish Match Company, but that profit is included in the profits of the Swedish Match Company on its own holdings, is it not so? I am not clear on this point, because in order to ascertain the profits of the International Match Corporation as such you have got to deduct the profits of the Swedish Match Company on its own holdings in the International Match Corporation.

Mr. Schele.—No. We are shareholders. What I mean is this. The International Match Corporation has got a balance sheet. If they show a profit of 10 million dollars, then the directors meet and declare they will put away so much for reserve, so much for taxes and so on and then they decide to pay a certain dividend. With an assumed dividend of 10 per cent. if the Swedish Match Company has got shares for 2 million they get 200,000 dollars dividend which is shown in their profits.

President.—Is the profit that the two companies make between themselves—first of all you have got the profits of the Swedish Match Company on this side (balance sheet shown).

Mr. Schele.—Then you have got to deduct the dividend from the International Match Company from the Swedish Match Company's profits and you get their profits irrespective of the International Match Company.

President.—I have no means of finding that out.

Mr. Schele.—You can get that from the "Financial News" or the "Financial Times." Or if you go to any American Bank they will tell you what the International Match Corporation paid.

President.—As regards the Swedish Match Company, it does not itself manufacture any matches, does it?

Mr. Schele.—No.

President.—How does it exactly operate?

Mr. Schele.—I have not much experience of the working at our home office. My business is in India. If you ask me anything about our position in India I know what I am talking about. Here we are enquiring into conditions of the match industry in India and I do not understand why you are asking me questions regarding the operations of the Swedish Match Company or the International Match Corporation in other parts of the world.

President.—We are enquiring into this question of Trusts and I want to understand how it works. It may be it is not a Trust in that sense?

Mr. Schele.—Would it not be sufficient for me to tell you how it operates in India? I am quite prepared to give you all possible information you ask for as to how we operate in India.

President.—It does not operate differently in India when compared to other countries? How does it manufacture matches?

Mr. Schele.—I do not know much about our operation at Home. I am quite prepared to facilitate your investigation as much as possible on that subject if you ask me about the position in India about which I know.

President.—It is for you to consider how much you are going to answer and how much you are not going to answer.

Mr. Schele.—The question is: "Can I answer?"

President.—If your knowledge is confined to India, Burma and Ceylon, say that your knowledge is confined to those parts.

Mr. Schele.—Yes, chiefly, to those parts.

President.—How does it operate in India as regards manufacture?

Mr. Schele.—We make our matches and sell them.

President.—That is not the point. How does the Swedish Match Company operate?

Mr. Schele.—The Swedish Match Company has got, as I said in my reply to the questionnaire, all the shares in some Companies. In other Companies they have got less as in the case of the Assam Match Company. If they show a profit (this has not happened yet) the Swedish Match Company will get the dividend on their shares and in that way the Swedish Match Company will benefit by the prosperity of their Companies in India.

President.—The Swedish Match Company has got five separate match factories. You have got the Assam Match Company and then you have got the Western India Match Company. Both these are controlled by the Swedish Match Company.

Mr. Schele.—All are.

President.—What I wanted to know is this. Are the accounts of these Companies kept separately as between themselves?

Mr. Schele.—In accordance with the Company law, a registered Company must have separate accounts.

President.—I know. That is to say the interests of each Company are separate.

Mr. Schele.—Absolutely.

President.—But so far as the results are concerned of all the Companies in the parent Company the interests are not shown separately.

Mr. Schele.—No, but of course they will have records. Say that I remitted home Rs. 1,00,000 in the shape of dividend. They will probably ask me for a specification how that dividend has been composed, wouldn't they? Thus they would have a record at the parent Company's office.

President.—Supposing one subsidiary Company incurs a loss . . .

Mr. Schele.—That Company doesn't pay a dividend.

President.—The bulk of the dividend belongs to you.

Mr. Schele.—Yes, if we have a majority.

President.—But you have a majority in that case.

Mr. Schele.—Yes.

President.—Can you give me instances in which any match factory has been closed down which had a separate account?

Mr. Schele.—The Mandalay factory had a separate account.

President.—There were no shareholders in it.

Mr. Schele.—No.

President.—That was your own concern.

Mr. Schele.—Yes.

President.—I am talking of a Company where so far you have other shareholders.

Mr. Schele.—We have only one Company in India where there have been outside shareholders and that is the Assam Match Company. In the Burma Match Company we have two outside shareholders, Sir Annamalai Chetty, Madras and Sir J. F. Simpson; otherwise we have no outside shareholders anywhere and never had.

President.—But you can close down the factory, because you have a controlling interest there. They can't do anything.

Mr. Schele.—We would naturally have a Director's meeting and decide the question.

President.—When the Directors meet, you have got the controlling vote and you can say that you are going to close down.

Mr. Schele.—If you have got full power, you can always do what you like.

President.—But you can close it down.

Mr. Schele.—Of course we can. If you have got full power, you can do what you like in anything. Then comes the question whether it is right or not.

Sales Organisation.

President.—As regards the sales organisation how does the Swedish Match Company operate here?

Mr. Schele.—We have got agents up-country and we have got canvassers and inspectors.

President.—Does the sales organisation buy the matches from the factories and then sell on its own account or what does it do?

Mr. Schele.—We are doing that now.

President.—My point is this. You buy the production of each factory.

Mr. Schele.—We do now, because it simplifies the account. We didn't do that before. First we had all the factories selling their products themselves. We wanted to know how each factory was doing every month. We found that we could not get the costing accounts in time on account of the sales. That was why we took the goods from the factories. Now we know exactly what the factory is doing every month and further accounting is done by the parent Company.

President.—You buy the whole production.

Mr. Schele.—Yes.

President.—Do you fix your price yourself or do the Companies themselves fix?

Mr. Schele.—We fix the price between us. This doesn't take place in the case of the Assam Match Company. That Company sells itself. We can't do that. The other things are for our convenience. Being a private company we do as we like. The Assam Match Company being a public company sells its own products direct to Messrs. Forbes, Forbes Campbell and Company at Calcutta.

President.—At prices arranged between themselves.

Mr. Schele.—Yes, prices depend on the market conditions. If we can get Rs. 1-10-0, we will sell at that price. If we cannot get that, we will have to reduce our prices. If the rates become too low, the Assam Match Company will make a loss.

President.—So far as the other Companies are concerned, I take it there is a sort of current account as between you and them. You say "all right, we will take your boxes at Rs. 1-6-0 or whatever it is", and then after that they have got nothing to do with what happens.

Mr. Schele.—Quite so.

President.—It all goes into what you call the Selling Company.

Mr. Schele.—Yes.

President.—And the profits that are made then are remitted to the Swedish Match Company.

Mr. Schele.—Yes, if there are any profits.

President.—I was asking you about the sales organisation before we adjourned.

Mr. Schele.—Yes.

President.—Is that sales organisation also in charge of your imported matches?

Mr. Schele.—No, that is altogether independent of me. All our matches are sold in London to the English houses there and they send out to India.

President.—Under which department of the Swedish Match Company?

Mr. Schele.—They sell to their agents in London and those agents sell to importers. Our whole trade is done in that way. Most of our matches are sold by London houses.

President.—You don't do that yourself.

Mr. Schele.—No. My position is entirely one of supervision and guidance.

President.—I understand for instance the Kemmendine Match Factory does not do that.

Mr. Schele.—That is an exception. For Burma we don't have any outside connection. They buy from the agents in London.

President.—Has the Swedish Match Company got a separate sales organisation like the Kemmendine Match Company?

Mr. Schele.—Do you mean in Sweden?

President.—Wherever you have import business.

Mr. Schele.—In the English home market we have a firm who buys like Kemmendine.

President.—That firm exports to India and other parts.

Mr. Schele.—No, they deal only in the home market. I think Kemmendine is rather an exception.

President.—Where does the Kemmendine Match Company buy its matches from?

Mr. Schele.—From London.

President.—Is it from the firm that you are talking about?

Mr. Schele.—Yes.

President.—And that I suppose is done on a commission basis.

Mr. Schele.—Yes.

Dr. Matthai.—They take the place of an import house in India.

Mr. Schele.—Yes. Our business in Burma was looked after by indent houses. Particularly during the last two years we found that the indent houses would not work the Burma market as we wanted. Their method was rather old fashioned.

Dr. Matthai.—What about the Match Manufacturing Supply Company? They supply materials, machinery, etc.?

Mr. Schele.—That is only an agency for machinery and chemicals.

Dr. Matthai.—Do many of the Indian factories buy from the Match Manufacturing Supply Company?

Mr. Schele.—Not as many as we would like, because they suspect us.

Dr. Matthai.—The Match Manufacturing Supply Company has its Headquarters in Bombay?

Mr. Schele.—Yes.

President.—Is that part of the Western India Match Company?

Mr. Schele.—No, it is a separate Company of which I am the Managing Director.

Mr. Mathias.—Is that also under the control of the Swedish Match Company?

Mr. Schele.—Yes.

Dr. Matthai.—Have any of the big Indian factories bought from the Match Manufacturing Supply Company?

Mr. Schele.—Esavi has bought from us.

Dr. Matthai.—Any of the people on the Bombay side?

Mr. Schele.—In Bombay we sell quite a good deal. We have sold machinery to Santa Cruz and Andheri. We also sell machinery in the Punjab.

Dr. Matthai.—Do you sell on credit?

Mr. Schele.—We sell for cash. In the beginning to get over the suspicions from the Indian Factories we agreed to take payment only after they were satisfied that the machinery was working satisfactorily. We also lent our expert to put the machinery in operation and then when everything was in order we got our payment.

Mr. Mathias.—Do you sell machinery to factories in Bihar and Orissa?

Mr. Schele.—Yes, we sold to the Government Factory at Patna.

Mr. Mathias.—That is not on cash payment.

Mr. Schele.—That was on those terms I have related. When the machinery was working, we got payment. As a matter of fact when they turned out 100 gross, we got our payment.

Mr. Mathias.—In full.

Mr. Schele.—Yes.

Mr. Mathias.—It was not an instalment payment.

Mr. Schele.—No, as far as I can recollect. In the first instance they paid some amount and the rest when they turned out 100 gross.

President.—This Match Manufacturing Supply Company deals with machinery, chemicals and all accessories.

Mr. Schele.—Yes.

President.—If you don't have this sales organisation for imported matches under your own control, then the Swedish matches may compete against your own manufacture. How can you regulate in that case?

Mr. Schele.—That is impossible to avoid. We have to take the consequence. The fittest would survive.

President.—Really do you mean to say that your Swedish match factory in Sweden exports matches here and would sell them in competition against the Swedish match factories in India.

Mr. Schele.—There is no competition, because the prices are on two different levels.

President.—Really it is rather difficult to follow. It means this that you yourself may drive out your own Swedish matches from this market.

Mr. Schele.—We leave it to the public to decide. We have to cater for the public.

President.—It is not a question of the public at all. You may say "We will make more money here by competing against the Indian manufacture and at the same time by competing against the Swedish manufacture." Do you mean to say there is no control at all as regards the regulation of your Swedish prices?

Mr. Schele.—The only thing as I said the other day is that we try to avoid selling our local matches where we sell the Swedish, because if we did, we would upset the importers' business.

President.—How do you regulate that?

Mr. Schele.—That is automatically regulated. If an indent firm find that they cannot dispose of the goods, they won't buy them. As long as they buy them, it is their look out.

President.—Now take the case of Forbes, Forbes Campbell and Company, do they import Swedish matches too?

Mr. Schele.—Yes.

President.—If they import Swedish matches at the same time as they sell the Indian matches, they must determine the market in order to prevent this competition.

Mr. Schele.—Take Calcutta for instance. There is a demand for Swedish matches. A dealer goes up to Forbes, Forbes Campbell and Company and says that he wants to buy Swedish matches. Swedish matches will be sold to him at a particular price. Then another dealer comes and says "I want to buy 'Wimco' matches." Those matches are sold to him. If we don't sell those matches, other factories will sell their goods. There is no use holding off. If I refuse, Esavi will supply that dealer.

President.—We put it to you this way. Where it pays to sell Swedish matches and not Indian matches, you naturally sell Swedish matches. To-day the competition is so great that you cannot make much profit on your Indian matches. In that case you may say "All right, we will sell our Swedish matches."

Mr. Schele.—We have no choice. I have got my factory in Calcutta. I have got to make 100 cases every day, otherwise my overhead expenses would go up. I have to sell what I make or close down the factory.

Mr. Mathias.—You don't sell in Calcutta.

Mr. Schele.—I do.

Mr. Mathias.—At the time we inspected the factory, we were told that not a single box was sold.

Mr. Schele.—We have altered since then.

Mr. Mathias.—So that you are talking about the latest policy.

Mr. Schele.—It was not a policy. There was not much demand for 'Wimco' in Calcutta. We thought for such demand that there is, let others cater for it. Since you visited the factory, we have not been able to dispose of our goods, so we had to sell also in Calcutta.

Mr. Mathias.—You changed that policy as far as Calcutta is concerned.

Mr. Schele.—Yes.

Mr. Mathias.—If there were no other Indian made matches, say, in a seaport town, then you would not sell your Indian made matches there.

Mr. Schele.—No.

Mr. Mathias.—There is no such place, is there?

Mr. Schele.—No.

President.—If you are overstocked with Indian matches, then you would first try to sell off your Indian matches and then try to bring in your Swedish matches, is it not?

Mr. Schele.—Yes.

President.—How do you regulate the two?

Mr. Schele.—That is what the public regulates. Why should a certain quantity of piecegoods be imported into India? Well, there is a certain demand and nobody regulates the piecegoods imports. Why is there a certain quantity imported of anything? Because there is a demand for it in the country. It is the law of the trade.

Mr. Mathias.—Who decides the question of policy as to whether you should sell your Indian made matches in Calcutta or not.

Mr. Schele.—I do.

Mr. Mathias.—Even though it may affect the sale of imported Swedish matches.

Mr. Schele.—Yes, it is entirely local.

Mr. Mathias.—Although the interests may clash?

Mr. Schele.—In that case, we must go by the sound economic rules. We cannot possibly accumulate goods in India.

Mr. Mathias.—Take this case. Where no other Indian matches are sold, you now sell your imported matches. Supposing you were to decide in the general interests of the Swedish Match Company that you should sell your Indian made matches in competition with imported matches, would there be any control on your decision?

Mr. Schele.—If they found that I had made a mistake, they would tell me so.

Mr. Mathias.—Supposing you did something which resulted in an increased sale of your Indian made matches at not very unremunerative prices, thereby displacing the sale of a considerable amount of Swedish matches, in a case like that would the higher powers interfere?

Mr. Schele.—I would probably put it up to them. After all, that has to be decided on sound economic principles. I sell two kinds of articles in a market. I make a profit of two annas by selling one article and a profit of three annas by selling another article. I suppose I would try to push the sale of the article which would give me a profit of three annas.

Mr. Mathias.—In the last resort, the sales policy as between your Indian made and imported matches is decided by the "higher commands"?

Mr. Schele.—They have no time to consider these matters in detail.

Mr. Mathias.—You said that you would not consult them.

Mr. Schele.—I would if I had an opportunity.

Dr. Matthai.—What the higher commands would do would be to adapt themselves to changing conditions in the Indian market.

Mr. Schele.—If I did not do that, I would consider myself a bad business-man.

Dr. Matthai.—I want to understand this. Take the Swedish Match Company. A certain quantity of imported matches which they make in Sweden is sold to importing houses here and a certain amount is made by factories here.

Mr. Schele.—Yes.

Dr. Matthai.—Supposing in India there is a diminishing demand for imported matches, it means so much less business for the importing houses dealing in Swedish matches.

Mr. Schele.—Yes.

Dr. Matthai.—In that case, it means a corresponding increase in the business of your local factories.

Mr. Schele.—It would be so if we were the only ones doing that business.

Dr. Matthai.—Assuming that you get an expanding market for local matches, your position is that the two things just balance themselves.

Mr. Schele.—Yes, assuming we were the only ones.

Dr. Matthai.—The higher command cannot dictate a policy apart from the conditions in the market.

Mr. Schele.—I don't say that. That is what Mr. Mathias says. I am looking after the Indian market myself. If I don't sell local matches, others will do it. It is rather a question of common sense.

President.—Supposing you are not able to push your Indian matches except at a loss, will the Swedish Match Company step in and say "no matter if we lose money, we will push the sale of Indian matches"?

Mr. Schele.—No.

President.—There won't be cut-throat competition between yourselves in India and the Swedish match business.

Mr. Schele.—No.

President.—There must be somebody to regulate that.

Mr. Schele.—There is the price to do that. As soon as the imported matches do not realise what we want in Sweden, we stop. That is why when the merchant in India finds that he can pay Rs. 1-4-0 he offers that business in London. We accept the order and ship the goods. Supposing he said he would pay only 11d. we would refuse to accept the order. In the piecegoods and all other imports it is the same.

President.—Supposing it was a question of your capturing the market, you may say "all right, now it is the policy of protection. We want to compete here. Let us reduce the prices of both Indian and Swedish matches." You may not only reduce the price of your Indian matches but also the price of your Swedish matches in combination.

Mr. Schele.—We don't want to capture any market. We want to make a profit. A company like the Swedish Match Company with shareholders all over the world would hardly do a thing like that. If we start to play about capturing markets, where should we be?

President.—I think that you would be all right.

Mr. Schele.—Not if we started selling everywhere at a loss.

President.—Not everywhere?

Mr. Schele.—We don't want to have 100 per cent. of the market. It is not a sound economic proposition.

President.—You enter into competition on both sides.

Mr. Schele.—India is in an abnormal position into which we have been led by force of circumstances.

President.—Supposing it came to this that you really wanted 60 or 70 per cent. of the market and that you could not get it except by entering into severe competition with the Indian industry,

Mr. Schele.—We don't say that we want 60 or 70 per cent. We never argue like that. We say "is there money to be made in India"? If there is no chance, I report to the home office that there is no money to be made. In fact, there is very little chance just now.

President.—Do you mean to say that these two corporations, viz., the Swedish Match Company and the International Corporation don't have to enter into competition against local matches wherever they have established factories?

Mr. Schele.—Yes, they do.

President.—Then, when they enter into competition . . .

Mr. Schele.—We don't go out with any pre-conceived idea that we want 60 or 70 per cent.

President.—The very fact that you have established factories in other places does imply that you want the market.

Mr. Schele.—We only want a certain share. As a rule we don't establish factories in other markets. We simply have taken over old ones.

President.—It comes to the same thing.

Mr. Schele.—No, say for argument sake that we built five new factories in a market where the consumption is fully covered, there would be overproduction.

President.—Having bought 5 factories, you will compete against the remaining 5.

Mr. Schele.—We try to live in peace with everybody and make a reasonable profit.

President.—You may say so.

Mr. Schele.—That is our aim.

President.—You may try to bring these factories to terms. If they don't come to terms, you may say "all right, we will compete against you."

Mr. Schele.—I would rather say that our cost of production is lower than others. They sell at a small profit. We also sell at the same price but our profit is higher and that satisfies us. Our policy is to live and let live.

Capital and Control of Policy.

President.—To come back to the question of capital: the first capital is 90,000,000 crowns.

Mr. Schele.—Yes.

President.—That is A shares, is it not so?

Mr. Schele.—Yes.

President.—Yesterday you made a point of British shareholders. Under the Swedish law, only one-fifth of the voting power may be held by foreign interests. Therefore of those 900,000 shares issued, the shares which carry votes are 178,500.

Mr. Schele.—Exactly.

President.—The remaining shares may be held by British shareholders but they would carry only 1/1,000th vote per share.

Mr. Schele.—Yes.

President.—So that, though the British capital may be represented by a very large sum of money, yet the voting power will rest with the Swedish shareholders.

Mr. Schele.—Exactly.

President.—And that is because your law requires that it should be so.

Mr. Schele.—Yes.

President.—If the same law was enacted in other countries, would the Swedish Match Company object?

Mr. Schele.—We cannot object to anything.

President.—Would you consider it reasonable if other countries did the same?

Mr. Scheld.—That is of course a law adopted by the Swedish Government.

Dr. Matthai.—This particular provision applies only in the case of companies which own natural resources.

Mr. Schele.—Yes, which own property.

Dr. Matthai.—I mean resources of a kind which are exhaustible. It is applicable in your case because the company happens to own 100,000 acres of forest land.

Mr. Schele.—That was the purpose of it. I think that the law says company owning property.

Dr. Matthai.—Owning landed property. I don't think that it is confined to forests.

Mr. Schele.—That is a point which can be easily ascertained and that has really been to the detriment of Swedish Industry. The capital in Sweden is limited. It is a small country and we cannot finance our developments ourselves. The result is that the companies get into the hands of Banks and they take advantage of them. It is rather an unhealthy position. It is very creditable that the Swedish Match Company was able to see its way through.

President.—All the Directors of the Swedish Match Company are Swedes as far as the names go.

Mr. Schele.—No. Mr. G. Akers-Douglas is an Englishman. Mr. J. W. Hills is another Englishman on the Board. There are two Englishmen.

President.—Out of how many?

Mr. Scheld.—Out of 16.

President.—On the Board of 16, you have two foreign Directors.

Mr. Schele.—Yes.

President.—You gave us the total number of shares as 1,800,000.

Mr. Schele.—Yes, that was before the last increase.

President.—Out of that, 1,61,000 shares were registered in the names of English shareholders.

Mr. Schele.—Yes.

President.—In spite of that, the number of British Directors is two.

Mr. Schele.—Yes.

President.—Can you really say that this Match Company represents British interests?

Mr. Schele.—I do. If English shareholders want more Directors on the Board, there is nothing to prevent that. What happens really is that many of the Swedish, the Directors are managers of factories.

President.—True, your law would not allow that.

Mr. Schele.—I cannot say that.

President.—Because the control must remain in the hands of Swedish people.

Mr. Schele.—We could have more British Directors without losing the control.

President.—They would be dummies. They would not have any power.

Mr. Schele.—You can always do that when you are in a majority.

President.—What I am trying to suggest to you is that though the British capital may be represented in this way, you cannot say that this company represents British interests.

Mr. Schele.—Let us put it the other way. Though the British shareholders have not got the actual control of the company, they have got the moral control.

Mr. Mathias.—The finance of the Company is mainly supplied by English shareholders but the control is entirely in the hands of Swedes.

Mr. Schele.—That is to the point.

President.—Do these British Directors have really any voice in the matter? *

Mr. Schele.—Yes, very much because both of them represent Banking firms in England.

President.—You have got the money; what control can they exercise without enough voting power?

Mr. Schele.—It is like any minority. If the majority takes an undue advantage of their position then they can do what they like.

President.—This being the position as regards British shareholders and your company as the Swedish Match Company also having got a controlling interest here, it does follow that really speaking the whole thing is a Swedish concern.

Mr. Schele.—That depends on how you look upon it. As far as profits go, more money goes to England than to Sweden; that is the most important point.

President.—Quite true, as far as dividends go, but that does not necessarily follow that more money goes there. You would naturally take the bulk of it, because you will sell the wood, you will sell the chemicals, you would sell the machinery and everything else.

Mr. Schele.—Yes, at ordinary market rates and ordinary merchant profit.

President.—I mean your country, not your company.

Mr. Schele.—Even from my list you will find that a lot of things come from abroad.

President.—The main things, viz., machinery, wood, paper and chemicals, are Swedish products so that you cannot say that the bulk of the money goes abroad.

Mr. Schele.—If you look upon it that way, of course, the position becomes different.

Dr. Matthai.—The bulk of the finance is British, but are the British financiers prepared to leave the bulk of the control into Swedish hands?

Mr. Schele.—Yes.

President.—Where do you hold the general meetings of the Company?

Mr. Schele.—In Stockholm.

President.—Do the British shareholders attend the meetings?

Mr. Schele.—Everybody can come.

President.—But do they?

Mr. Schele.—I have not been to any of these meetings, but I think it is the same as in India; practically nobody attends at all. Sometimes there is not even a quorum in this country.

Dr. Matthai.—If you declare a bad dividend you get more than a quorum.

Policy with regard to India.

President.—We were talking of the Indian market and you said it would not make very much difference to you. Here in this prospectus you have given 132 million kronen as the total value of your yearly production which is equal to 80 million rupees.

Mr. Schele.—Yes.

President.—You took the value of your imports and the manufacture here as 4 million gross, plus another 4 million gross. That is the total of your operations at the time of the prospectus?

Mr. Schele.—Yes.

President.—If you take 8 million gross as your present sales—

Mr. Schele.—It is not 8 millions at present, it was 7,200,000 last year, that is for the calendar year 1926.

President.—You are equipped to manufacture 4 millions now and the value of the market would be 8 millions if your expectations came up.

Mr. Schele.—I don't think so because we won't be able to maintain the imports.

President.—If you cannot maintain the imports your local production will go up?

Mr. Schele.—If the imports disappear that does not mean that we will get the whole of it because others will also capture a portion of it.

President.—They say "For some years heavy duties have been imposed on the import of matches into India, and the question of establishing local factories there on a large scale has been under consideration. After full investigation it has been decided to embark upon this policy and match factories are now being erected at Bombay, Calcutta, Madras and Karachi, all of which will commence operation during 1924, and it is expected that commencing with 1925 a highly satisfactory return will be obtained."

Mr. Schele.—Have there been any factories erected in Madras or Karachi? I can only say what I have said. I must admit that it is very unpleasant for me to be confronted with this statement. At the same time I ask the Board to compare the amount that was secured with what would be required for Indian market.

President.—Even if you took 7 million gross for last year and taking it at the rate of Re. 1-4-0 per gross on an average per gross—

Mr. Schele.—That is too high because a large percentage of it is half size which are much less in price—I would say out of that 5 million gross is half size and the balance is the full size.

President.—What would you assume the value at?

Mr. Schele.—The average price of half size is 1s. 1d., that is about 12 annas 6 pias per gross for 5 million and the rest is 1 rupee, so that it is 2 million rupees. I calculate it at about 6 million rupees. That is calculated on the imports and the manufacture in India.

President.—Out of 80 millions?

Mr. Schele.—But, you have really to take the import figures only. We did not make matches in India in those days.

President.—I am only trying to make a comparison of what the value of this business is to you. What do you estimate the world's demand at, at present?

Mr. Schele.—I do not know.

President.—In the prospectus of the International Match Corporation it is stated that "the constituent companies manufacture 10 billion boxes or 600 billion matches per annum."

Mr. Schele.—The Swedish production is supposed to be 600,000 cases, that is 30 million gross.

President.—That represents about two-thirds of the world's production.

Mr. Schele.—If they say so, it must be correct.

The Western India Match Company.

President.—Coming to the Indian companies, can you tell me who are the partners in the Western India Match Company.

Mr. Schele.—I am the managing director. I think Mr. Bunbury was one shareholder and Mr. Bierman was the other man.

President.—The capital is Swedish entirely?

Mr. Schele.—Yes, entirely.

President.—What was the idea of starting this as a private company?

Mr. Schele.—It is always very convenient to have a limited liability company when you start business; you can make it into a public company easily.

President.—I thought the idea was that you were to have the co-operation of Indian capitalists.

Mr. Schele.—Then we will have to make it into a new public company.

President.—Why was it not formed into a public company?

Mr. Schele.—The reply to that is given in Mr. Kreuger's speech: "It is not our intention to try to monopolise the Indian match trade, and we have decided to seek the co-operation of prominent Indians in our Indian undertakings. We would prefer, however, to wait a little, so that the situation in the Indian match industry may be established, in order to get a sounder basis for co-operation and thus prevent disappointments." I think personally we were rather in a hurry in forming the Assam Match Company. I am sorry we did it. We thought that matters would turn out better; otherwise our intention has all along been to make public Companies as soon as we could show a good return.

Dr. Matthai.—What was the element of disappointment in the Assam Match Company? Was it the fact that you made it a public Company or that you started business in Assam?

Mr. Schele.—How could it be disappointment if it was started as a public company?

Dr. Matthai.—The President was asking you why you didn't have the Western India Match Company registered as a public Company and then you read Mr. Kreuger's speech and said that you ought to have proceeded slowly and that you had made a mistake as far as Assam was concerned. What was the mistake? Was it the fact that you started business in Assam or that you started a public Company in Assam?

Mr. Schele.—I thought this was clear enough from the information I volunteered entirely on my own initiative. At present matters are so uncertain in the match trade that we should not call in outside shareholders and make them run the risk. It has been our intention all the time to make public Companies. We have prominent Indians who have promised to accept offices as Directors and take an interest as soon as we are ready.

President.—The point is this: You say that you wanted to take Indians first, but when your capital in the case of the Assam Match Company was oversubscribed by Indians, you gave only a portion of their capital.

Mr. Schele.—Yes.

President.—You didn't give them enough.

Mr. Schele.—We gave them two-fifths.

President.—But you kept yourself three-fifths.

Mr. Schele.—Yes.

President.—So that you can't say that you have not received enough co-operation from Indian capitalists, when your capital was oversubscribed 3 times more.

Mr. Schele.—I have not stated that we didn't receive enough co-operation.

President.—What I want to say is when Mr. Kreuger talks of co-operation, there, it means that he keeps the bigger portion.

Mr. Schele.—He keeps the control; because otherwise we may be pushed out of the business.

President.—I don't see where the Indian capital benefits except to the extent that some of them get a few shares.

Mr. Schele.—If it is a big Company, it will be a good many shares.

President.—Anyhow three-fifths would be kept by you.

Mr. Schele.—If it came to that, I would even recommend to let the Indian shareholders have 51 per cent. We should very soon be able to buy back that extra percentage in the open market which would give the control.

President.—Have you made up your mind when you are going to convert this into a public Company?

Mr. Schele.—Yes, as soon as we can show a reasonable profit.

President.—So far as the Western India Match Company is concerned, is it your case that you have not made enough profit?

Mr. Schele.—Yes, not enough. I would even say, no profit at all.

President.—And until you are able to make a profit, you don't wish to convert it into a public Company.

Mr. Schele.—How can we? We can't go to the public and say "join this Company which is being run without profit."

President.—If you have the same thing as you have done in the case of Assam Match Company on a prospectus, you would have got the capital in Bombay too.

Mr. Schele.—It is not very pleasant to disappoint shareholders. We thought we were out of the wood when we started the Assam Match Company, but we found that we weren't.

President.—Did you consider that as your best proposition? What was the point of starting the factory in Assam?

Mr. Schele.—We found that it was a sound proposition at the time. We allowed the Assam Match Company the benefit of our costly experience in India. That Company we started with a clean slate so to speak.

President.—Can you tell me how many shareholders you have got in the Assam Match Company?

Mr. Schele.—I can't say right away, because shares change hands very frequently, but the Registrar of Joint Stock Companies who has got the latest returns can tell you. I find from the returns showing the applications for registered transfers, that chiefly the Indian shareholders are very ready to part with the shares.

President.—As regards these Rs. 2 lakhs, that was not all Indian capital.

Mr. Schele.—No, it was not. Everybody was treated on the same basis.

President.—How much was the Indian capital?

Mr. Schele.—I can't say right away. I would be able to give you that figure very easily. What happened was Rs. 6 lakhs were subscribed and everybody got 3rd irrespective of who he was, whether he was a Hindu, Muhammadan, Christian, or Marwari.

President.—I wanted to know how much Indian capital was invested.

Mr. Schele.—I will be able to tell you that later on.

The Burma Match Company.

President.—As regards the Burma Match Company I take it there is only one Indian shareholder in Burma Match Company and that is Sir Annamalai Chetty.

Mr. Schele.—Yes.

President.—That was a going concern that you bought.

Mr. Schele.—Yes, in a way. I would rather say it was stumbling.

President.—You didn't seek the co-operation on any large scale of Indian capital.

Mr. Schele.—I am very glad, we didn't.

President.—You don't regard that as a very promising proposition.

Mr. Schele.—No. I look upon the Burma Match Company as the least promising proposition of all our concerns.

President.—As regards Burma, it was suggested that you tried to buy Adamjee Dawood's and that you offered him the cost price.

Mr. Schele.—No, it must have been more. It is a very high price. I was not there at the time.

President.—Higher than he had spent or higher than it was worth.

Mr. Schele.—It must have included a premium.

President.—What was the point of buying that factory?

Mr. Schele.—To eliminate unsound competition.

President.—And that is ordinarily the practice of the Swedish Match Company to try and buy all factories.

Mr. Schele.—In reply I can only refer to Mr. Kreuger's speech when he says: "Even in other parts of the world we are building new factories and taking an interest in existing match concerns, and I hope before long there will not exist any country in the world where we have not either a regular import trade or a local match factory. (*Cheers.*) At the same time I wish to state that it is not our intention to try to extinguish competition in the match trade."

President.—Now take Burma. You bought up the two match factories. The remaining you tried to buy. If that is not extinguishing competition, I should like to know what is.

Mr. Schele.—For instance, we noticed that Adamjee, Dawood was selling at a loss. We thought it was very unsound. Our idea was to put the thing on a paying basis. We also knew that his factory was badly arranged. We intended to give him the benefit of our experience and put the whole thing on a paying basis. If we subsequently had raised our prices unduly, there would be exports from Calcutta factories right away.

President.—You don't mean to say that you wanted to buy Adamjee Dawood's factory in order to save him from losses.

Mr. Schele.—Not him, but ourselves and incidentally make a small profit for Adamjee's.

President.—The first idea was to kill the competition.

Mr. Schele.—No.

President.—Then what was the purpose?

Mr. Schele.—Exactly what I was saying to establish the match trade on a sound basis as on the same principle Dr. Matthai pointed out a little while ago. Our intention was to speed up the developments to get a few big factories working on a sound basis, giving regular employment to Indians, having a good credit and giving good matches to the Indian public.

President.—That may be all very well.

Mr. Schele.—That is a fact.

President.—Ultimately your object is to earn a higher dividend for the Swedish Match Company.

Mr. Schele.—Naturally. It is not a charity concern.

President.—But you are arguing as if you are doing it for the benefit of the other people.

Mr. Schele.—At the same time we do it for the benefit of other people.

President.—In Japan you have done the same thing. You bought some factories.

Mr. Schele.—That is more to have an interest in the match trade of Japan. The freights to those parts are too high from Sweden and we wanted to have a certain hold either by building our factories in Japan or buying old ones if the latter course was more economical.

President.—In Japan I think they have got the same law as you have.

Mr. Schele.—I don't know about that.

President.—That is to say, I don't think foreign companies or companies under foreign control can be established in Japan.

Mr. Schele.—Those are matters that I don't know.

President.—I am not quite sure, but I think my impression is that no foreigner is allowed to hold any landed property in Japan. That being so there would be first difficulty.

Mr. Schele.—I don't know at all what happens in Japan.

Mr. Schele.—Yes, as soon as we can show a reasonable profit.

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Mr. Schele.—I don't know at all what happens in Japan.

President.—Do you claim that you have got a controlling interest in Japan?

Mr. Schele.—Not so far.

President.—What percentage have you?

Mr. Schele.—I can't say, but we have no control.

Mr. Mathias.—I don't quite follow your object in starting these factories in Japan.

Mr. Schele.—We didn't start. We bought the old ones.

Mr. Mathias.—Why buy them at all?

Mr. Schele.—To be able to control the market in that part of the world which we could not reach in competition with the Japanese matches on account of high freights.

Mr. Mathias.—Control the markets with what objects?

Mr. Schele.—Make money. It is not exactly a question of control but a question of selling matches. We knew that if we had the same natural advantages as Japan, we would probably be able to make more money than they did. Japan is again a country which has natural advantages for the Match Industry and we thought that that was a country we should like to be in—to a certain extent.

Mr. Mathias.—You thought it was a country for making money in the match business.

Mr. Schele.—Yes.

President.—Have you been to Japan yourself?

Mr. Schele.—No.

President.—That, I take it, would be under the control of the International Match Corporation.

Mr. Schele.—Yes.

President.—You didn't buy these factories right out.

Mr. Schele.—I don't think so.

President.—You bought a half share with the option of buying them out with interest at the end of four years.

Mr. Schele.—I don't think so.

President.—I should like you to look at Mr. Adamjee's evidence where the suggestion is that the Swedish Match Company bought some factories.

Mr. Schele.—Didn't he say in India?

President.—In Japan. The condition was if the Company made a loss, the Japanese vendor had the right to claim back his share value with interest and the suggestion was that the Company did make a loss and so you got back the whole of that by paying the interest.

Mr. Schele.—How do you mean?

President.—You had a half share and the Japanese vendor had a half share.

Mr. Schele.—With regard to Adamjee. He had the option to sell his other half if it didn't pay. It was not our option to buy. It was entirely his free will to sell the other half.

President.—He said that the factory was running at a loss and he would like to have his money back with 50 per cent. interest.

Mr. Schele.—It sounds very childish. Who would go in for a thing like that?

President.—I am speaking from memory.

Mr. Mathias.—There was also a proposal made to Adamjee's at Rangoon that you being far more skilled in turning out matches than Adamjee's Company you should take the control of the factory and that you should run the factory on a half share profit basis and at the end of 4 years, if you didn't make any profits, he should have the option of selling you the remaining half plus compound interest at 6 per cent. at the end of 4 years.

Mr. Schele.—That was very nice to Adamjee.

Mr. Mathias.—Was that proposal made?

Mr. Schele.—I can't say for certain. If it was made, that seems to me to be in favour of Adamjee, because he had a fair chance for 4 years. If he suspected foul play as he seemed to imply in his evidence, it was his own free will to remain as long as he could. He could kick up a tremendous row in public if he thought that the concern was not doing so well, as it could do I can tell you those are not the methods of the Swedish Match Company.

President.—That is why I am putting it to you. It is for you to deny or explain. These allegations have been made against you. Do you suggest that no such proposal was made?

Mr. Schele.—If it was made, it was made to his advantage.

President.—I want to know whether the proposal was made or not.

Mr. Schele.—I do not know.

President.—Who could have made it? I think that there was one gentleman by name Mr. Littorin, who wrote a letter about that.

Mr. Schele.—The letter does not show anything except that there was some kind of proposal. I know that there was some proposal but I don't know the details. I will be able to give you full satisfaction in Bombay. All the papers are in the head office.

President.—You must do so when we meet again. It is for you to explain. It is an allegation made against you, and it is for you to explain.

Mr. Schele.—If any such proposal has been made, I ask whether it is not a straightforward proposal.

President.—We are not prepared to give you any explanation. We want to know what the facts are.

Mr. Schele.—I shall be able to give you satisfaction on that point.

President.—He also said that you filed about 10 or 11 cases against him in the courts, when your offer was refused by him.

Mr. Schele.—We had to file cases against him because he was deliberately infringing our trade mark.

President.—That was one case.

Mr. Schele.—The number of cases was not as many as 11. The unfortunate part of it was that our Manager at Rangoon had a nervous break down and was not responsible for his action. He took action against Adamjee without consulting the head office on labels which did not belong to us.

President.—You filed one case which was fought out in the High Court.

Mr. Schele.—That was a big case relating to five stars.

President.—We were told that you filed several cases on labels which did not belong to you.

Mr. Schele.—There was one case in which there was infringement and there was another one in which there was doubtful infringement.

President.—And they were withdrawn.

Mr. Schele.—When I came to Rangoon and found what had happened, I withdrew them.

President.—The suggestion is that the company behaved vindictively because he refused to sell the match factory to you. If you have got anything to say to that, we would like to hear.

Mr. Schele.—That is childish. I know from our part that it was simply a question of stopping him from infringing our trade mark. We intend to start three more cases in Bombay because there are infringements right and left. I suppose that the manufacturers in Bombay will say that we are persecuting them.

President.—They might say that.

Mr. Schele.—I can only say that we did not take any action against anybody in any vindictive spirit.

President.—If you choose to answer you may do so, but I don't consider this a complete answer.

Mr. Schele.—How would you like me to answer? I have said that it was not done in any vindictive spirit. What more can I say? It was a *bona fide* case against Adamjee for infringing our trade mark.

Mr. Mathias.—How long did it take between his refusing the offer and your filing the case?

Mr. Schele.—One year.

President.—There is keen competition, is not there, in Burma.

Mr. Schele.—Yes. He is our only competitor. Others do not count.

Mr. Mathias.—Mr. Adamjee Hajee Dawood had been manufacturing matches for how long when this case was brought against him?

Mr. Schele.—Two years.

Mr. Mathias.—Would it be right to conclude that you took action against the alleged infringement of trade marks at what you considered the earliest opportunity?

Mr. Schele.—Yes.

Mr. Mathias.—Was it in respect of the label?

Mr. Schele.—Yes.

Selling Agreements.

Dr. Matthai.—Have you made any proposals about joint selling to any of the Indian match factories in India?

Mr. Schele.—Yes, we have, just considered whether it would be possible to avoid the present cut throat competition. We have discussed this question with several people.

Dr. Matthai.—None of them has materialised.

Mr. Schele.—No. They do not like us.

Dr. Matthai.—Generally the proposals broke down because they did not accept the conditions.

Mr. Schele.—No conditions were laid down.

Dr. Matthai.—Could you give me some idea as to the sort of conditions on which the proposals were made?

Mr. Schele.—Mr. Hossainbhoy Lalji came up to my office.

Dr. Matthai.—Is he running the Andheri factory?

Mr. Schele.—Yes. He came to see me and we discussed for one hour. He could not see any way out and said that if we co-operated, Santa Cruz would not play the game. So, I said "will you go and talk to Santa Cruz factory people." I have never seen him since.

Dr. Matthai.—Could you tell me precisely what your proposal was?

Mr. Schele.—The proposal was that we should try to come to an arrangement regarding prices.

Dr. Matthai.—Was it simply a general proposal?

Mr. Schele.—Yes. He said that he would go and consult others.

The publication of costs and evidence.

President.—Before we finish the proceedings, I should like again to draw your attention to the question of publicity. I would make it clear at the outset that we are not here concerned in this enquiry at all with foreign capital as such coming into the country in the ordinary way, for the reasons given by me when I opened the enquiry in Burma. Our investigation is limited to this one question so far as the Swedish Match Company is concerned, namely, whether it operates as a trust in the sense that its object is to create a monopoly as far as possible for the manufacture of matches in India. For that purpose it is essential that we must go fully into the con-

stitution of the Company, its methods of operation and its objects. Now on all those points you have given us some evidence as far as it goes but at the same time you have put in a claim to be examined *in camera*, and I have allowed the examination *in camera* in the hope that you will see your way afterwards, at any rate, to allow us to publish all these proceedings in full. You have told me that when you go home you would explain the position to your Directors and that you would do the best you can to assist us.

As regards the question of costs, it is on a different footing altogether. You have refused to give the costs to us even in confidence. We take rather a serious view of this. You may refuse to give us any costs just now because we have not got the power to compel you to put the costs before us. But I have been seriously considering, in view of the attitude taken up by you and the Company what steps I should take in order to protect the public interests. It appears to me that I should approach the Government of India to arm this Board with powers to compel you to give us your costs and information on other relevant points. You have claimed two privileges which we have generally denied to Indian applicants. The one is that you have not given us any costs at all even in confidence and the second is that you claim that the costs and every other information should be treated as confidential. You cannot reasonably expect this country to give you any greater indulgence than it does to its own people. I am putting this to you in a friendly spirit. If I have to approach the Government of India and the Government of India accepts this proposal to arm us with the necessary powers, that would require legislation in September. I don't think that it would create a proper atmosphere for the Swedish Match Company if its position is discussed by the Indian Legislature before our final conclusions have been reached and submitted to the Government of India. Your refusal to give us the information at all or publicly is partly based on your claim that a large amount of your capital has been subscribed in Great Britain. Even if there was any force in such claim you have admitted that the capital is controlled entirely by a foreign organisation which is unwilling to co-operate with the Government in a very important enquiry. Facts such as these must lead to a premature discussion of the affairs of the Swedish Match Company in the Legislature before our enquiry has been concluded. I would depreciate such a contingency, for if it arose, it is likely to create some prejudice against the Company which may affect its interests when our final proposals go up for decision. When a foreign Company takes advantage of the tariff wall and settles down here, this country is entitled to expect from it at least the same assistance as it would from its own citizens. You have failed so far to give this assistance, I am sorry to say, and I think that you have gone further than any other applicant whose claim to assistance we have entertained, because you have refused to give us the costs even in confidence. Our proceedings very largely depend on the accuracy of our information and the publicity that we are able to give our proceedings. If you force our hands to ask for powers which we have not found necessary to possess up till now, it is obvious that we must take steps to secure them in the public interest.

Now what I wish to know is whether you are prepared to consider these points and to inform the Board by the end of June whether the information would be given to us. If we don't hear from you by then, of course, we shall take such steps as may be necessary because we cannot allow this enquiry to proceed under such conditions. You take shelter behind a tariff wall, you get the costs of your rivals and having known them you don't want to tell us your own costs. Apart from other considerations, it is unfair to the Indian manufacturer that a foreign rival should know his costs and withhold his own.

Mr. Schele.—As I said in the morning, the question of costs is a matter on which I have not been able to consult my home people and as you know a branch manager cannot very well on his own go about and give the costs to anybody. At the same time what you have said has cleared the atmosphere as far as costs go and on the basis of what you have said I shall be able to discuss the matter when I go home.

President.—Your reply must be received by the Board before the end of June. You have to consider three points. One is whether the whole of this evidence that you have given should be published or not. The second is whether you would give us the costs and all the particulars that we require. The next point is whether you would claim that that information should be treated as confidential.

Mr. Schele.—Would you look upon that as an unfriendly act?

President.—Obviously. Your biggest rival is Adamjee in India, and he has laid all his cards on the table.

Mr. Schele.—He is not. Our biggest rival is Esavi in Calcutta.

President.—We have not examined that Company yet. If it makes any difficulty we shall have to deal with it on its own merits. But all the evidence that has so far been given has been given in public both as regards costs and other matters and I wish to consider whether you would claim any greater indulgence than the Indian manufacturer.

Mr. Schele.—I don't think that we can claim anything at all.

President.—In your representation you have taken up the position that you are not interested in this enquiry, a position which I do not admit. You are interested to the same extent as any other manufacturer in this country so far as protection is concerned because in their report your Assam Directors certainly state that they are in favour of protection. If it is your intention to take advantage of the protective tariff, then you are clearly interested.

Mr. Schele.—The only thing there is that we rely upon the other manufacturers to talk as much as there is to be said about protection, and they will certainly do that.

President.—Your position may be such at present because you are interested in imports as well. Suppose the imports are shut out you would be as much interested as any other Indian manufacturer in the question of protection, would you not?

Mr. Schele.—Perhaps we see clearer than they do. My own personal opinion is that the position will be very much the same even with protection. There will be no profit.

President.—What I say is that as a manufacturer of Indian matches you are as much interested in the question as anybody else who is manufacturing at present.

Mr. Schele.—Let it be as you say.

President.—As regards the examination of your representative in Bombay I think that if you have not got sufficient knowledge of the operation of the Swedish Match Company—to-day you said you were not very familiar with this and so I did not put you many questions—either you prepare yourself on this question or get somebody else to appear before us because we attach a very great deal of importance to this aspect of the question. It is for you to consider.

Mr. Schele.—I will discuss that when I go home. I suppose the home people will think that that will be looking into matters which are entirely private.

President.—That is for us to decide.

Mr. Schele.—That is how we look upon it.

President.—Let me tell you that it is not a question which concerns you alone. It concerns this country very much, for it is entitled to know how a certain organisation operates in the country. Its operations are not merely confined to this country and we want to see how it operates in other countries and whether it is operating there in the same way as here or in any other way. If you don't choose to give any evidence, as I say, we will have to consider how it may be possible for us to compel you to give it.

Mr. Schele.—That depends on our free will. Nobody can compel us.

President.—I have already told you that I am considering whether the Board should not ask the Government of India to give it such powers as the

Tariff Commission in the United States of America and other places possess or different powers altogether to compel witnesses to give evidence when they are interested in any industries which they have established in the country. It is a far more important question than you seem to think.

Mr. Schele.—That is entirely for the home people to decide.

President.—We have not got the home people before us except in so far as you can claim to represent them.

Mr. Schele.—If we are asked to give out everything that is private, they may say “good-bye to India,” or they may appreciate the President’s views and give the necessary information. Those are the two possibilities.

President.—That is for you to consider. I am not suggesting anything.

Mr. Schele.—That is how it will develop. There are only those two possibilities.

President.—I express no opinion on that remark. It is for you to consult your Board and to communicate their views to us before the end of June.

Mr. Schele.—If it comes to publishing, it will not be done before everything is concluded I suppose?

President.—This part of the evidence we propose to publish as soon as you allow us to do so. It is our practice that after an enquiry has reached a certain stage, we publish all our proceedings and I think we have reached that stage, because we will not be able to go on with this work for three or four months and we shall take advantage of the interval to publish all the evidence that has been taken so far, documentary and oral, and to invite public criticism on that evidence. When necessary, we re-examine the same witnesses. This is only a preliminary examination. We have not really learnt much about the industry yet and if the public choose to come and assist us after reading our proceedings, well and good; if not, we shall proceed in the usual way. It is important that this evidence should be published before you return. Perhaps, I may explain to you that you need not cable to us your costs or other information. What we want to know is whether you would be prepared to lay all the costs and other information before us and whether you would be prepared to make your statements before us in public.

Mr. Schele.—You mean when I come out again? That rather puts the matter in a different aspect.

President.—You must give us the costs in writing as other people have done; then you say whether you will come and give evidence before us in public or whether you would give evidence in camera and whether these proceedings that have already taken place should be allowed to be published or not. These are the points on which you must advise us by cable before the end of June.

The Clearing of Stocks.

Mr. Schele.—May I say a word, Mr. President, before we conclude in order to avoid any misunderstanding. We have got very heavy stocks in our factories in Bombay and Calcutta and in order to clear these stocks and get a balance between production and sales, we have been compelled to lower our rates and this is being done since last week. We have lowered them to a level that we think will enable us to attain our object. I put this before the Board so that it may not be said afterwards that we took certain steps in order to kill other factories at this juncture.

President.—Will you send us the prices at which you are going to sell?

Mr. Schele.—Those are more or less the prices that we have given you and if there are any further reductions, I will let you know from time to time.

FOREST DEPARTMENT, ASSAM.

Evidence of Mr. E. R. Le GRAND JACOB, I.F.S., Conservator of Forests, recorded at Shillong on Friday, the 24th June 1927.

Introductory.

- President.*—Mr. Jacob, you are the Chief Conservator of Forests, Assam?
- Mr. Jacob.*—I am the Conservator of Forests; there is no Chief Conservator here.
- President.*—How long have you held the post?
- Mr. Jacob.*—Just over a year—since April last year.
- President.*—How much of your service has been spent here?
- Mr. Jacob.*—Of nearly 24 years service I have spent about 20 years in Assam and in the old province of Eastern Bengal and Assam.
- President.*—Then you know the jungles well personally?
- Mr. Jacob.*—Yes.

Note on match woods.

President.—We received from the Government of Assam in February last a note written by you, and I would like to examine you on some of the points mentioned therein. The first question is “The existence, quantity and suitability of wood for the manufacture of splints, veneers and packing cases”. In answer to that you give eight kinds of trees I am not quite clear from the table as it is printed whether there are only three trees which are suitable for splints, two for veneers and two for packing cases.

Mr. Jacob.—In this Table dash means no and ditto means yes.

President.—What are the usual country names of these trees?

Mr. Jacob.—I did not give them intentionally because the names vary in so many provinces.

No. 1—Kadam.

No. 2—Simul.

No. 3.—Assamese Khokan, Bengali Malagri: it is a very common tree in North Bengal as well as in Assam.

No. 4—Ghambar; in Assam it is Gamari.

No. 5—Mallata: I think the name is the same in both provinces.

No. 6—Pine; not available in Bengal.

No. 7—Udal.

No. 8—Sum.

President.—I suppose these eight kinds of trees that you mention grow very fast, do they not?

Mr. Jacob.—No. I have only mentioned those which are available in very large quantities.

President.—Are there any difficulties in extraction?

Mr. Jacob.—No.

President.—We were told that only two out of these could be extracted very easily and in sufficient quantities.

Mr. Jacob.—The Assam Match Company are using bombax and sum: that is just where they are working, but in other parts of Assam there are very large quantities of others. The Assam Match Company is now working in the Nowgong Division where there are enormous quantities of simul.

President.—All our evidence so far has been that it is a scattered tree and is very quickly cut out.

Mr. Jacob.—That is so, but it is an extraordinarily quick-growing tree.

President.—Do you have large areas where bombax is shown in large quantities?

Mr. Jacob.—Yes.

President.—Have you a map?

Mr. Jacob.—The provincial map is very tiny. The areas where you find them in large quantities are almost the whole way along the Brahmaputra, from Tezpur upwards and up the branches and up the Dihong river; and also further up above Dibrugarh there are masses of it.

President.—Is it a riverine tree?

Mr. Jacob.—Yes.

President.—Is it in any way different from the bombax malabaricum you find in the Deccan or the Central Provinces?

Mr. Jacob.—I fancy it is a very much quicker-growing tree on this side of India, but botanically it is the same; but I should certainly consider the *simul* on this side of India superior to that in any other part of India. It grows to enormous sizes and starts branching out much higher here.

Match wood within reach of the Assam Match Company.

President.—Could you give us any idea of the supplies within a reasonable radius of the Assam Match Company's works?

Mr. Jacob.—The whole of the *simul* is practically outside the reserve forests. Those areas are always liable to be flooded and washed away by the Brahmaputra. It is chiefly in grazing lands and the areas are heavily grazed during the cold weather and the *simul* simply comes up in a mass very often, so that we have got no records at all. As I said, the areas get washed away and new areas grow, and I know myself of an area where there was a growth of a mass of *simul* about 2' to 3' girth in three to four years.

President.—Is there any difficulty about getting supplies from contractors?

Mr. Jacob.—Very little.—There are any number of contractors. Of course the difficulty is that the Assam Match Company's factory is in the wrong place and it has got the wrong machinery.

President.—Why do you say it is in a wrong place?

Mr. Jacob.—Last cold weather at Dhubri the channel had dried up and they had to drag the logs 1½ miles across the sand, to the factory itself.

President.—Once they get their logs on the Brahmaputra there is no difficulty, is there?

Mr. Jacob.—They get them down, but they can get them only within 1½ miles of the factory and from there they have got all the expense of carting them to the factory.

President.—They have practically given up their concession, is it not? They are not working it now.

Mr. Jacob.—They are now working in a new place in the Nowgong district under the ordinary permit system, that is at Rs. 2 per tree. I was wrong; that is the rate in Goalpara; the rate in Nowgong is Rs. 0-0-6 per c.ft.

President.—But still the sand difficulty applies, if, as you say, their factory is badly situated: they have still to drag a mile and a half?

Mr. Jacob.—Yes, in the cold weather only; the water comes in during the rains. They have not made any arrangements to have sufficient logs to last them the whole year round.

President.—Is that due to the system that they just extract as they need it?

Mr. Jacob.—I can only say this: their representative came to see me a short time ago. He himself thinks that the factory is in a wrong place.

But he said in future it would be their system to extract during the rains and store them for the cold weather.

President.—Would there be any difficulty, if their factory was situated on the bank of the river, in extracting during the cold weather and floating the logs down?

Mr. Jacob.—I don't think there should be. But there is always the difficulty in the case of the Brahmaputra because the river changes enormously. For 20 years you have deep water in a part of the Brahmaputra, but then it suddenly may change its course leaving the place practically dry. There are certain places, especially where there is a bit of rock and not sand on the bank, where the river remains more or less in a permanent channel.

President.—Where is the factory now extracting its timber from?

Mr. Jacob.—Nearly opposite Tezpur; there is a very large amount of Simul there.

Dr. Matthai.—Is it further away from the factory?

Mr. Jacob.—Yes. But it is on the main river.

President.—Could you give us some idea of the dragging necessary before floating?

Mr. Jacob.—There are large amounts within a few hundred yards. They intend to drag about a mile only.

President.—What amount would that be?

Mr. Jacob.—I have not been to that part for a good many years, but their man's estimate was that they had about five years' supply of simul.

President.—This other tree, *Machilus Bombycina*, does that grow in blocks?

Mr. Jacob.—That grows chiefly along the rivers and also along smaller streams. It is also planted artificially. It is a silkworm tree and is very common all over Assam and it is easy to get the seed.

Plantations.

President.—Has the forest department undertaken any plantation?

Mr. Jacob.—No. The villagers do it themselves.

President.—I suppose the forest department has a good deal of information on record about these trees. In Burma we asked about the possibility of planting various kinds of matchwood and we were told that the forest department there had no experience. They hoped to carry on plantation but they could not really tell us how long it would take for the plants to grow or how successful they would be or what the cost would be, because, they told us, if the trees were grown in an artificial manner in blocks disease might develop in them; and so they were unable to give us any estimate of the financial aspect of the question. In Assam, as regards this particular tree would you be in a position to give us some estimate?

Mr. Jacob.—I don't think so because we have not done any planting ourselves.

President.—But your forest officers would have some experience?

Mr. Jacob.—I do not think so. It is merely done in small patches by villagers. We have not done any ourselves.

President.—Is it grown in batches of half a dozen trees?

Mr. Jacob.—More like a couple of acres or so.

President.—Would not your forest officers have experience of any disease which might have broken out?

Mr. Jacob.—I have never heard anything about any disease in it.

President.—What sizes do these trees grow to?

Mr. Jacob.—They are not very large trees; they are medium size. Occasionally they grow to 5' girth, more often about 4 feet.

President.—Do they grow regularly?

Mr. Jacob.—They are straight and round trees.

President.—Do you think they are suitable for matches?

Mr. Jacob.—Yes, they are quite suitable.

Dr. Matthai.—The first tree that you mention, does that grow in large quantities?

Mr. Jacob.—There is a lot of it, but never in large quantities in any one place. It is scattered right through.

Dr. Matthai.—Is that a tree which would be accessible to the Assam Match Factory people where they are working now?

Mr. Jacob.—No.

Dr. Matthai.—We heard a lot about it in Burma. They have been making experiments in match making and it has been apparently found as satisfactory as any other tree they tried.

Mr. Jacob.—It would be the tree to plant in my opinion. It is extremely rapid growing. It grows very straight and it is very very easy to grow from what I have seen.

Dr. Matthai.—What do you estimate as the period of maturity for a tree like bombax?

Mr. Jacob.—My estimate is that it ought to grow to 7' girth in 30 to 35 years.

Dr. Matthai.—There seem to be various estimates of the rate of growth of bombax. Prof. Troup, as you know, puts it at 20 to 30 years, and he says a good average would be about 25 years.

Mr. Jacob.—I think he is on the low side, because it grows very rapidly up to 5 feet girth: in fact I have seen over 5' girth in 12 years, but then it seems to slow up and the wood seems to harden up. Up to the time it attains its main girth, the wood is very soft and spongy. Then the wood hardens up.

Dr. Matthai.—At what girth.

Mr. Jacob.—At about 5'. When the thorns disappear the wood starts maturing.

President.—So that a 3' simul tree would be useless for veneers?

Mr. Jacob.—Quite useless.

President.—Would it be too soft?

Mr. Jacob.—Yes.

Dr. Matthai.—It would be all right at about 4' girth, would it not?

Mr. Jacob.—No. That is one reason why the Assam Match Company is not doing well.

President.—We have received evidence that the smaller trees 3' girth trees—as a rule have a smaller heart and can be worked down to a thinner core, possibly to a 3" core, whereas in the case of larger trees there is a very big wastage by way of heart. We saw in Burma some of the core discarded there running to a foot or 9" in diameter, whereas when we were looking round the Western India Match Factory at Calcutta where they are using what they call genwa—a Sundarban tree—they were working down to about 3 to 4". Of course, the machinery they have installed depends on the trees they are dealing with. So that if here they had installed the machinery to deal with 3' girth trees, and if you cannot use simul unless it is over 5' girth, obviously it would not be a paying proposition to use simul at all; either they will have to use trees of suitable girth or they will have to purchase new machinery.

Mr. Jacob.—I have told them so.

Dr. Matthai.—As a matter of fact it would be better for them to concentrate on *machilus bombycina*?

Mr. Jacob.—Yes, I should have added, "with the present machinery."

Dr. Matthai.—Is *machilus bombycina* of slower growth than *bombax malabaricum*?

Mr. Jacob.—Probably, but we have no record of the growth.

Dr. Matthai.—There is one thing about *machilus*. It is a tree which Troup has not mentioned and apparently it is not a tree which has been tested at Dehra Dun?

Mr. Jacob.—That is so.

Dr. Matthai.—The Assam Match Company were complaining that the splints they got from it were of dark colour and that there was a certain amount of prejudice on that account. Do you think the splints would be dark coloured?

Mr. Jacob.—Yes, it would be darker than simul.

Location of the factory.

Dr. Matthai.—You were talking about the location of the factory. From the market point of view I think Dhubri would have advantages which few other places in Assam would have.

Mr. Jacob.—I do not think so, because it is only on a branch line.

Dr. Matthai.—It would give you access both to Eastern Bengal and Assam? It is on the border between Assam and Eastern Bengal.

Mr. Jacob.—But on the other hand you would always have access to Eastern Bengal by steamer from other places, which would be cheaper.

Dr. Matthai.—Personally you would consider Dhubri on the whole unsatisfactory location?

Mr. Jacob.—I cannot say unsatisfactory from the market point of view because there are both the steamer and the railway routes.

Dr. Matthai.—Does it give them any particular advantage in respect of the market?

Mr. Jacob.—I cannot see any.

Dr. Matthai.—What about labour? In your note you say very little labour is available?

Mr. Jacob.—It is very difficult to house the labour there.

Dr. Matthai.—Where exactly do they recruit their labour from?

Mr. Jacob.—I do not know. I did not ask them. From the look of the people, they appeared to be Chota Nagpuris.

Dr. Matthai.—From the rate of wages that you gave us, it appears that they are not particularly high. I don't suppose in any other province we have got a lower figure than that for unskilled labour in a match factory.

Mr. Jacob.—I think that is the usual rate paid. I think 12 annas is about the average.

President.—In Burma they were paying about a rupee and they said that was a little cheaper than Bombay.

Mr. Jacob.—I do not know exactly what they pay in Dhubri but I don't think that it would be more than that.

Extraction of timber.

Dr. Matthai.—I wonder if you could give us some idea of the transport facilities between the area where they worked under their lease and the factory? What distance would they have to drag up to the river point if you take an average felling centre in that area?

Mr. Jacob.—The actual area where the simul was worked is very close to the Manas river. They have an enormous amount up to within half a mile.

President.—Was there any difficulty about rafting there?

Mr. Jacob.—I believe not. It is a permanent stream with heaps of water all the year round.

President.—The evidence of the Western India Match Factory is they have no difficulty once they get on to the Brahmaputra.

Mr. Jacob.—The Manas river is a swifter stream than the Brahmaputra. But I should think that there is likely to be some difficulty where there is not enough still water to make up the rafts.

President.—Then they could be floated without rafting.

Mr. Jacob.—In that case they will have to collect them on the Brahmaputra. They will never be able to do that because the river is much too large and they will get 70 per cent. of the timber washed away. They cannot do it at Dhubri.

Dr. Matthai.—How exactly is the dragging done?

Mr. Jacob.—By elephants. We are using buffaloes departmentally now experimentally and finding them much cheaper. Up to a few years ago only elephants were used.

Dr. Matthai.—You give the cost of rafting from this particular reserve to the factory as Rs. 3 per ton. If the dragging is over so short a distance as a mile or a half, it could not be expensive. The royalty that you charge is much lower than in many other provinces. It comes to Rs. 1-8-0 a ton under the monopoly.

Mr. Jacob.—Yes.

Dr. Matthai.—If it is Rs. 1-8-0 per royalty plus Rs. 3 per rafting and say Rs. 3 for dragging, it comes to about Rs. 8 a ton at the factory which is an extraordinarily low charge for timber delivered at the factory.

President.—In Burma the evidence given by Messrs. Adamjee Hajeew Dawood and Company was that the average price at which they got their timber was about Rs. 40 at the factory. That is for sawbya. They start up here at a great advantage over other provinces.

Mr. Jacob.—I don't know if the dragging cost is right. The cost of dragging depends on the supervision of elephants used. I will give you an instance that happened to come to my notice five or six years ago. I was up inspecting the work of a certain timber company. They had got six elephants there: one had escaped and two had been sent to look after that elephant. The fourth and fifth were sick so that there was only one elephant left. These elephants cost them Rs. 90 a month each; that is Rs. 540 a month. I also found that one elephant was dragging on an average two logs of 15 c.ft., that is, three-fifths of a ton a day and that cost them Rs. 540 a month. That is the real part of the work that requires most supervision. You can lose your money or save money very much more easily there than in any other part of the work.

Dr. Matthai.—Then extraction by elephant is likely to be very expensive?

Mr. Jacob.—There is much more capital required. If you keep all your elephants working and fit, then probably it is the cheapest but I think there is much more risk with elephants than with buffaloes.

President.—Supposing, for example, that your trees grow in fairly large blocks and not scattered would you consider that it is a more profitable business for a company with sufficient capital to lay down some sort of a tramway than to extract the timber by elephants?

Mr. Jacob.—That has got to be worked out in each case.

President.—Have you no experience?

Mr. Jacob.—I have had some figures but only for heavy timber, such as sal and not for this kind of timber.

NOTE.—I find we have no figures, which can really compare; when I spoke, I was thinking of our Goalpara Forest Tramway; but we have only figures for extraction over long distances; we are charging at present —/1/- per c.ft. per 6 miles for carriage of purchasers' timber on the tramway; if the equivalent of -/-/2 per c.ft. per mile, this would work out at -/8/4 per ton; extraction with elephants could not possibly be done at this rate.

President.—We shall be obliged if you will let us have them. There may be something to learn even if the figures referred to *sal*—the cost of extraction by elephants as compared with the cost of extraction by mechanical transport.

Mr. Jacob.—I will let you have the figures.

President.—You say that there is great difficulty in the matter of supervision of the elephants dragging the timber.

Mr. Jacob.—That is so.

President.—What number of elephants would you usually use? Would you take a herd of elephants if you were to have an extracting operation on a large scale?

Mr. Jacob.—It just depends on the amount of timber to be extracted and the time you want to do it in.

President.—How do you manage about the supervision?

Mr. Jacob.—We have only got a few elephants to use for dragging. Nearly all our main timber is sold standing and the contractor has to do the extraction. He is really on the spot and supervises the whole thing himself.

President.—But in your departmental extraction how is it arranged? Do you send one of your forest officers?

Mr. Jacob.—If it is at all big, we have a gazetted officer in charge.

President.—On what sort of pay?

Mr. Jacob.—Rs. 300 to 600 a month; very often an assistant conservator. I was myself in charge once of extracting timber for about 70,000 sleepers.

President.—In an operation of that magnitude how many elephants would be employed?

Mr. Jacob.—At that particular moment we did not employ any. They were cut into sleepers and then hand-carried to rough cart tracks.

President.—Supposing you were extracting trees in an operation of that magnitude, how many elephants would you employ?

Mr. Jacob.—That would be 150,000 c.ft. or 3,000 tons of timber. An elephant, if fit, can roughly do 2 tons mile a day. Therefore if we allow an average dragging of a mile, that is 2 tons a day, then one elephant during a working season of six months, with 25 days a month, would be able to do 300 tons during the season. For 1,500 tons it would mean 5 elephants and for 3,000 you would require 10. To provide for the sick list and other casualties you would have to add two more.

President.—Apart from the supervision of the elephants and so on, the upkeep of the elephants I suppose includes *mahouts* and costs you Rs. 90 each, so that it comes to roughly Rs. 2 a ton per mile.

Mr. Jacob.—Yes, roughly.

Dr. Matthai.—We might take 2 tons mile a day I suppose as the general dragging capacity of an elephant?

Mr. Jacob.—Yes, that is what we reckoned working in the Andamans.

Dr. Matthai.—Is there anything peculiar in the Andamans to make the work slower?

Mr. Jacob.—Yes, in that tropical climate you have got to work your elephants for shorter hours.

President.—The Assam jungles are thick and difficult to negotiate, are they not?

Mr. Jacob.—I do not think they are more difficult than the Andamans. If anything, the Andamans are the more difficult.

Storage of match timber.

Dr. Matthai.—Coming back to the location of the Assam Match Factory, you were saying that it was rather difficult to raft the timber right up to the factory. I suppose the only alternative for them is to do all their extra-

tion during the monsoon or at any rate to do all the rafting during the monsoon? That would mean a certain amount of storing at the factory end.

Mr. Jacob.—Yes.

Dr. Matthai.—If you take bombax and machilus how long do you think they would keep without deteriorating?

Mr. Jacob.—So long as the bombax is kept in water it will last for years. I don't know much about machilus.

Dr. Matthai.—If there is lack of water at the factory end, the storing would be difficult?

Mr. Jacob.—Although the water is cut off there is still water and they could easily bank it up when the water starts running down.

Dr. Matthai.—You don't think there would be any difficulty about storing the wood?

Mr. Jacob.—I don't think so.

President.—Our general impression was that if trees of any description were kept under water for three or four months they became unsuitable for match manufacture.

Mr. Jacob.—I was thinking more of the timber for 3-ply wood and wood for tea chests. I have really had not much experience about match making but if they want their timber as fresh as possible, I fancy there will be difficulty in rafting them down in any one time of the year.

The Assam Match Company's lease.

Dr. Matthai.—Originally these people had a monopoly for this reserve. Have you any idea why it is that they wanted a monopoly to start with? Was there any suggestion on the part of any other party to start a factory?

Mr. Jacob.—No. I think it was to prevent any rivals coming in.

Dr. Matthai.—And at the end of the year they thought better of it?

Mr. Jacob.—I think they were not getting sufficient timber.

President.—Was it entirely due to insufficient supply of timber or due also to the difficulty of extraction?

Mr. Jacob.—I think partly insufficient supply of timber inside the reserve. Outside the reserve and in the unclassified forests we cannot give any monopoly for the simple reason that the Deputy Commissioner might give the land away to the villagers. We have no control over the actual land.

President.—In the reserves the majority of the wood is hard wood, is it not?

Mr. Jacob.—Yes.

Dr. Matthai.—When you give a lease of that kind, you give them rights over the soft wood in the reserve. It is not a question of clear felling?

Mr. Jacob.—No.

Dr. Matthai.—When it comes to the actual felling, your officers mark the trees, do they?

Mr. Jacob.—As far as I can remember the company was allowed to mark the trees themselves.

President.—Did they extract the hard timber also?

Mr. Jacob.—No.

Departmental working of the forests.

Dr. Matthai.—Generally in your forests, the reserves would be divided into coupes, wouldn't they? How exactly is the system worked here? I gather that the system in other provinces is somewhat like this: You have the reserves and reserves are divided into coupes. If I have a lease for the reserve, when it comes to felling what happens is that I take a few compartments in each coupe and fell the trees in one year and then go round to other coupes in each succeeding year and thus work the whole thing on a rotation system. I should like to get some idea as to what you do.

President:

Mr. Jacob.—That is how we are working the sal forests in the Goalpara extraction, but in other parts, at present we have just started a system under which a block is leased out to a contractor and he has to pay a minimum royalty a year for so many years, say Rs. 2,000 a year for five years. That worked out on what we estimate is the material to be removed. If in three years he has worked out, say, Rs. 10,000, the lease lapses. In order to keep the blocks to himself he has to pay Rs. 2,000 a year for five years whether he works it or not. If he removes timber in three or four years up to the total royalty to be paid and thus finishes it in that period, his lease then lapses.

President.—Up to the present you have had no system of rotation?

Mr. Jacob.—No. We have not gone in for it. A large proportion of our forests is ever green and we have not even touched the fringe of it.

President.—So that it is not necessary to arrange for natural regeneration?

Mr. Jacob.—We are just starting working plans.

President.—Up to the present you have really not gone into it in any great detail?

Mr. Jacob.—No. The demand is just starting in the ever green forests very largely for sleepers. There is a demand for the supply of a minimum of 2 lakhs to the Assam Bengal Railway. In Kachar and Sylhet the demand is increasing enormously.

Dr. Matthai.—Rs. 2 a ton under the ordinary permit system, is the average royalty charged in Assam or is that only for soft trees?

Mr. Jacob.—I am not quite sure.

Dr. Matthai.—I don't want exact figures.

Mr. Jacob.—The trees are now classified into about four or five classes. The rates are not the same right through the province; they vary in different districts and the rates in the reserves also vary from those in the unclassified forests.

Dr. Matthai.—What are your most valuable trees in Assam?

Mr. Jacob.—Sal in the lower Assam and hollock in the Upper Assam.

Dr. Matthai.—What royalty would you charge for sal?

Mr. Jacob.—There is no fixed royalty. All our coupes are sold by auction. The rates vary according to the number and size of trees.

(NOTE.—There is a fixed royalty in unclassified forests; but this only applies to sales of a few trees, not in large quantities).

Dr. Matthai.—Have you any idea, when you put these things up to auction, what kind of return you get on the average?

Mr. Jacob.—I think it works out to about a rupee a c.ft. standing, but it is very difficult to say because a lot of poor stuff comes in, and if you take them into account probably they are worth very little, and you do not know how much is being realized for good trees. Perhaps Rs. 1-40 per c.ft. will be the average.

Dr. Matthai.—Rs. 1-40 I suppose would be a fair average?

Mr. Jacob.—I would have to get last years' sales at Goalpara to see how much it worked.

President.—Have you any teak in Assam?

Mr. Jacob.—Yes. We have one teak plantation—30 miles from Gauhati.

President.—How much does that fetch?

Mr. Jacob.—Very little. We use it departmentally. It was started about 1867 and went on till about 1880. The plantation is about 50 years' old. Up to the present we have not been able to sell the teak at all. We use it departmentally.

Lease conditions.

Dr. Matthai.—When you give a lease of this kind, apart from the forest rules, do you insist on special conditions; for example, would you specify the minimum girth that could be cut down?

Mr. Jacob.—Yes.

Dr. Matthai.—In this lease that you gave to the Assam Match Company was there any condition of that kind?

Mr. Jacob.—I think it was 2' or 2'-6". I think that was the minimum specified.

Dr. Matthai.—Do you have any definite condition as to the minimum quantity to be extracted in any particular year?

Mr. Jacob.—We usually do.

Dr. Matthai.—When a party asks for a lease over an area I expect he gets some rough idea himself of the amount of wood in that area?

Mr. Jacob.—I think sometimes he doesn't.

Dr. Matthai.—When a man, for example, pays to the extent of, say, Rs. 2,000 for a monopoly I think as a business man he would first of all try to make an estimate of the wood available.

Mr. Jacob.—I don't think in this case the Assam Match Company people did that. In this instance they took it merely on hearsay. I was not here when the lease was made, but looking through the file I gathered that they went purely on hearsay.

President.—You never heard that they sent a forest man of their own to make any survey at all?

Mr. Jacob.—I have not heard anything of that kind.

Dr. Matthai.—Have you had no enumeration survey of the trees in the forests here?

Mr. Jacob.—Only sal and we are now beginning to do enumeration further up in Assam.

Dr. Matthai.—What about hollock?

Mr. Jacob.—That is in a mixed forest, but we are beginning to do it.

Dr. Matthai.—Would it be very difficult to do it with regard to bombax?

Mr. Jacob.—Yes, for the simple reason that most of it is outside the reserves.

Dr. Matthai.—It comes to this, that the party himself will have to do what enumeration he can? The Forest Department won't be able to help him?

Mr. Jacob.—That is so. We have not at present got the staff to do it.

President.—On the outturn of the Assam Match Company it would appear that they would require 1,500 tons and something like 3,000 tons if they were working up to their full capacity. Would there be any difficulty in getting that quantity for the next 20 years?

Mr. Jacob.—Not the slightest difficulty.

President.—At what price do you think they could land their wood at the factory?

Mr. Jacob.—I should say they ought to get it at Rs. 18 to 20 a ton.

Transport to Calcutta.

President.—What about the transport to Calcutta? Would it be possible to transport any of this wood to Calcutta?

Mr. Jacob.—Do you mean in the log?

President.—Yes.

Mr. Jacob.—I rather doubt it.

President.—By river for instance?

Presid.

Mr. Jacob.—If you raft it down you have got the whole of the Sundarban tract to work through before getting it to Calcutta. You will have to go through a stream in some cases and there is not much current there.

Mr. President.—The Western India Match Company told us that they had intended to take it to Calcutta and they gave it up. I wanted to know whether there was any particular reason for that.

Mr. Jacob.—I think it is difficult to get rafts across the Sundarbans.

President.—Would it be possible to take the wood by rail?

Mr. Jacob.—Yes, but the cost would be very heavy—8 annas a c.ft. or about Rs. 25 a ton. I don't know exactly what the railway freight is for light wood. The rate I am taking is for sal. These woods are only half as much in weight as sal.

President.—But they occupy more space?

Mr. Jacob.—Yes.—But I think there is a slightly lower rate for soft wood. The rate for sal is slightly higher, but how much I do not know.

President.—So far as you know has any attempt been made to take any of the soft wood down to Calcutta?

Mr. Jacob.—I do not know.

Dr. Matthai.—Are there any other uses for bombax and machilus apart from the manufacture of matches?

Mr. Jacob.—Bombax is used for 3-ply, for general manufacture and a fair amount of plank was being sent to Calcutta. It is also used for cheap dug outs.

Dr. Matthai.—What about machilus?

Mr. Jacob.—As far as I know it is not used.

Plantation of Bombax.

Dr. Matthai.—If there is a future for bombax in the ply wood industry in Assam and also the match industry, the question of the plantation of bombax might assume rather an important aspect?

Mr. Jacob.—We did some planting of bombax sometime ago in the frontier tracts.

Dr. Matthai.—Was it a very successful experiment?

Mr. Jacob.—It was very successful. It was done in this way. In certain parts in the frontier tracts the political officer, Sadiya, issued orders that the Miris must put down these trees in their land under our supervision in between their cultivation. They were paid at the rate of Rs. 4 a hundred—I am speaking from memory, but I think I am right—for plants 8' high in the second cold weather. It was worked out in this way: they pay a hut tax of Rs. 3: 75 trees were planted per acre so that what it really meant was, that they got the hut tax remitted by us provided they did the planting.

President.—We are told in Burma that unless they got 80 per cent. successful they paid nothing at all. Supposing they did not get good results here, what would you do?

Mr. Jacob.—We do the same I think.

President.—Your system is practically the same as that in Burma.

Mr. Jacob.—Yes. It is a certain percentage and in addition we gave them first class trees, hollock for example, for dug outs, to encourage them.

President.—How many acres was it?

Mr. Jacob.—As far as I can remember 4,000 acres.

Dr. Matthai.—In how many years?

Mr. Jacob.—In 7 or 8 years.

President.—How long ago?

Mr. Jacob.—I was in charge of it up to 1918. We can only do there, because elsewhere there is no means of compelling them, but in frontier tract the political officer can issue orders.

President.—Have you any shifting cultivation in other parts of Assam.

Mr. Jacob.—Yes, all over Assam.

President.—Then there would be no difficulty?

Mr. Jacob.—There is such an enormous amount of land outside the reserves that you cannot manage it.

President.—Was this plantation done with reference to the match industry or was it with reference to the tea chest industry?

Mr. Jacob.—Tea chest industry.

President.—How far away was that from the tea chest factories?

Mr. Jacob.—Where they have put the factories is just about the bottom of where we did the plantation. We did a little below Murkong Seek and most of it is up.

President.—So that it is within easy reach of these factories?

Mr. Jacob.—Yes. It will be about 1940 when the trees begin to mature.

Dr. Matthai.—Do you think we should be able to get sufficient official information about the financial aspect of that plantation to form some idea how far it would be worth while to form a plantation? Is there any official record about it?

Mr. Jacob.—We could easily find out what the amount paid each year was.

President.—Could you give us a note on it—of the success of the experiment, whether there was any unusual disease which appeared among the trees and so on?

Mr. Jacob.—Yes.

Dr. Matthai.—On what sort of land was this actual plantation done?

Mr. Jacob.—It was unclassed land.

Dr. Matthai.—When you start a plantation on unclassed land it would be rather expensive, would it not? because there would be the question of land acquisition?

Mr. Jacob.—It is all Government property.

President.—Land acquisition in this sense that the villagers have a right to use the forest in a particular way and if you are going to use the land exclusively for the plantation of simul trees you have got to compensate the villagers for that right.

Mr. Jacob.—There are heaps and heaps of forests.....

President.—So that the question of compensation does not arise.

Mr. Jacob.—No.

Concessions to persons of foreign nationality.

President.—On this question, whether any restrictions have been imposed on the grant of concession to applicants of foreign nationality you say: "No restrictions were imposed in the case of the company now working. Such restrictions are imposed in all mining concessions and it is open to Government to impose such restrictions in the case of other enterprises. Such restrictions would take the form of requiring the company to be controlled by British subjects." Would not there be some difficulty in enforcing any such restriction? How would you ascertain that the Company is being controlled by British subjects exactly?

Mr. Jacob.—It is much more a question for Government. If a foreigner applies for a concession I would simply refer the matter to Government.

President.—Supposing a British subject applied but the concession was really worked in the interest of a foreigner or a foreign company, it would be almost impossible for you to find that out?

Mr. Jacob.—I quite agree. I think it would be impossible to check that.

President.—Have you any idea as to whether there would be any practical
 extract of imposing restrictions on the use of forests by persons of foreign
 nationality?

Mr. Jacob.—It would be possible if Government were to make the person
 declare where the capital is coming from, but they will have to take his
 word for it.

President.—Without a very elaborate system it would be very difficult to
 impose such a condition, would it not?

Mr. Jacob.—Yes.

Total supply of available match wood.

President.—You said in answer to Dr. Matthai that you cannot give any
 estimate of the total available supply of match wood in the province?

Mr. Jacob.—No, I really could not give you any figure with any accuracy.

President.—In Burma we could not get any estimate but we were able to
 get a rough idea of the amount which would be available from certain blocks
 which were accessible from Rangoon. Would it not be possible for you to
 give us any idea as regards Dhubri?

Mr. Jacob.—I could not give you any figures with any accuracy.

Dr. Matthai.—What they did in Burma was this: they had enumeration
 in small typical areas and then they estimated on the data that the distri-
 bution of soft wood in the particular reserve was about 3 per acre. I do
 not know if you have any general estimate of that kind which you have
 formed.

Mr. Jacob.—It would be possible to work out taking simply the length
 of various rivers where we know the simul grows, allowing, say, one mile
 strip and then working out from that what is likely to be the total. But
 personally I don't think the figures would be accurate.

President.—The position seems to be this. As far as the present factory
 concerned, there is an ample supply.

Mr. Jacob.—Yes.

President.—As regards other factories you cannot at present say whether
 supplies would be available or not?

Mr. Jacob.—No.

President.—In any case it is doubtful whether the export of match wood
 from Assam would be an economic proposition.

Mr. Jacob.—Do you mean export of matchwood in the log?

President.—Yes.

Mr. Jacob.—My own opinion is that it would not.

President.—If you export in the form of splints there are other difficulties.

Mr. Jacob.—Yes. I do not quite know what the economical cost of delivery
 of timber at a factory is. The Manager of the Assam Match Company at
 Dhubri told me in January last that he was given figures from Bombay that
 it cost them Rs. 25 a ton. In Lahore when I was there year before last
 at the opening of the match factory there, they said they wanted to get it
 at Rs. 18.

President.—As a matter of fact our general impression was that in Burma
 they got it at Rs. 40 a ton and that it would be an economic proposition to
 get it in Calcutta at Rs. 60.

Mr. Jacob.—At that rate I should say it would be possible. I was taking
 it at Rs. 25, and at Rs. 50 I should say it would be possible to get the timber
 down.

President.—But then you could not give us any estimate of the quantity?

Mr. Jacob.—I am afraid I cannot.