9. *To Mr. Veitch.*] It is true that brown coal is largely distilled in Germany for the making of oils, but these oils are not as good from the point of view of public lighting as are the oils obtained from petroleum-fields. In the case of the coke they obtain in Germany, they are able to get a local sale for it. It burns quite well in the German household stove, but we should have to get our market here. We should have to get the public to persuade themselves that this was the right stuff to use. The cost of production would be the difficulty. If people could get American oil which will burn well in their lamps they would much prefer it to an oil made from the distillation of brown coal. There is another point: In any of these processes of oil-distillation if you want your oil to be presentable it has to undergo a large amount of refining, and one of the substances you require is a considerable quantity of sulphuric acid. The price of sulphuric acid in New Zealand is, I think, something which this Committee would do well to look into. Before the war we got it at ten guineas per ton on the wharf, and that is too high a commercial price for a number of manufactures which depend on the use of it The price is, of course, much higher now.

10. *To Mr. Luke.*] Many branches of chemical-manufacture are dependent upon the use of sulphuric acid. Sulphuric acid as used in English gas companies cost not more than £2 before the war. It was probably not of such a high grade as the ten-guinea acid, but good enough for the purpose. At ten guineas a ton for acid it does not pay to make sulphate of ammonia at the gasworks, and this is a decided loss to the agricultural community.

11. *To Mr. Sidey.*] I hardly like to recommend that the State should establish a sulphuric-acid factory, but it is worth while looking into.

12. *To Mr. Veitch.*] The proposal to make oils from Orepuki shale is, I consider, not so likely to be profitable as boring for oil. I may say that I made careful examination of Orepuki. There was so much sulphur in the shale that the oil was objectionable. The paint on the houses in Orepuki was blackened by the sulphurous gases though the works were a long distance away. The Orepuki works did not attempt to make kerosene; they made a gas-oil for the railways. The oil they made would require a different kind of burner to give satisfaction in an ordinary kerosene-lamp. This is a most important point: If the public buy oil and find it will not burn well in their kerosene-lamps, what will they do? They will keep the lamp and go to the old oil.

13. *To Mr. Sidey.*] The Scotch shale-oil is not highly sulphurous, as the Orepuki product is. The oils from Bovey Tracey, on the other hand, are too sulphurous to find a market in peace-time.

14. *To Mr. Hornsby.*] I have heard all sorts of explanations as to why Orepuki closed down, but do not know anything for certain, except that the working-costs were too high. The sulphuric-acid difficulty was mentioned by the manager as one of the difficulties.

15. *To Mr. Sidey.*] I would not put anything into the shale deposit financially.

16. *To the Chairman.*] As to prospecting the Dominion to ascertain whether oil is available or not, I should say that the Government should do it and protect itself. Opinions differ among geologists themselves as to whether oil is to be found. I know distinguished geologists who say that the evidence is distinctly favourable.

17. *To Dr. A. K. Newman.*] In some cases you can say with tolerable certainty that oil will not be found, and in other places you can say there is a fair prospect of oil being struck.

18. *To the Chairman.*] My feeling is that it is the duty of the State to develop our industries. It should also prospect. There should be a definite policy with regard to improved value by imposing a research-tax on the country where a find is made.

19. *To Dr. A. K. Newman.*] There are considerable deposits of sulphur in the Rotorua district and on White Island. I believe Kempthorne's at one time used a considerable quantity of New Zealand sulphur.

20. *To Mr. Hornsby.*] I cannot say that the bringing-in of the electrical treatment would enable the Parapara iron to be marketed successfully. For smelting you must use good coke or charcoal, even if you have electrical energy, and until you have that the Parapara ore will remain undeveloped. The actual amount of phosphorus in it is too small for a phosphatic ore suitable for the Bessemer treatment and the production of basic slag, but too high to be considered a first-class ore by those who are manufacturing iron with the object of making it into steel, other than by the Bessemer process. With regard to the phosphates which, it is said, exist, though not in payable form, I do not know of any deposits in New Zealand that, with the aid of electrical processes, could be brought into commercial use. In New Zealand we have excellent deposits of fireclay, though I suppose we import much more than we make. We ought to make all our own fireclay goods. There are deposits of phosphates in Otago, but I do not know the extent of them. Some Otago phosphate rock I have analysed has been of good quality.

GEORGE CRAIG, Assistant Comptroller of Customs examined. (No. 21.)

I understand that the Committee desires information in regard to the duty on imported cigarettes. The matter is somewhat complicated. It is not really as simple as it might seem to put the matter in a clear way. The duty is £1 5s. 6d. per thousand, irrespective of quality, if the cigarettes weigh not more than 2½ lb. per thousand; but if they weigh more than that the duty is 10s. 6d. per pound. The idea is to catch the heavy Egyptian and other cigarettes. The duty before the war was 17s. 6d. It has been raised 8s. per thousand. The duty on cigarettes made by machinery in bond really depends upon whether they are made from imported leaf or from New-Zealand-grown leaf. The duty on the imported leaf is 2s. per pound. The excise duty on cigarettes made by machinery is 5s. 6d.; so that the total duty payable on cigarettes made by machinery in bond from imported raw leaf is 7s. 6d. per pound—that is, 18s. 9d. per thousand. So that the protection given to cigarettes made by machinery in bond from imported leaf is 6s. 9d. per thousand, and if the cigarettes are made with machinery in bond from New-