

the problem during the war period. With your assistance we want to be able to do so in the post-war trade.

*To Mr. Veitch:* No doubt after a time we will be able to still further reduce prices, more especially if we can purchase the component parts cheaper.

*To Dr. A. K. Newman:* In the event of protection being granted I personally would not mind submitting prices to the Government from time to time. Personally I would not object to the Government protecting the consumer.

A. DOIG, Managing Director, New Zealand Coal-tar Products (Limited), examined.

The company's works are in Wanganui. We manufacture the finer products of coal-tar. The industry is a new one for New Zealand. The history of the coal-tar products industry is of great importance not only to the research chemist and student of industrial economics, but also to the politician and the leaders of industry. The coal-tar industry, which originated and received its early development in Great Britain, has grown to one of great profit and importance, but after a period of much prosperity it became gradually more and more centralized in Germany, and has latterly been one of her most profitable industries. The average dividends paid by six of the largest firms in this line are upwards of 20 per cent. on a nominal capital of about £12,000,000. The ramifications of the influence of the coal-tar products industries in Germany are indeed most astonishing, and a close investigation of the causes of their success will well repay those who are responsible for the future success of New Zealand industries. The reasons given for the relative decline of the industry in Britain and its phenomenal development in Germany are numerous and varied. Amongst the reasons given for its decline in England may be mentioned the supposed lack of well-trained chemists, our admitted early neglect of chemical research, defect in our patent laws, the excise restrictions on alcohol for industrial purposes, the fiscal system, want of enterprise and co-operation amongst manufacturers, and the apathy of successive Governments towards industry as distinct from commerce. It is begging the whole question to say that New Zealand has not progressed in the coal-tar products industry because she has not the specially trained chemists necessary for its cultivation. Germany did not have them fifty years ago, and if she has them to-day it is because this ever-expanding industry has called them into being. It is starting at the wrong end to be clamouring for special chemists when we have no use for them. I would like to see the Government of New Zealand offer some special inducement to firms that take up this research work, and thus open up new industries. In this connection I would like to mention that in Great Britain the sum of £10,000 a year has been granted for ten years to assist research work in the products of coal-tar. Of course, in this Dominion one cannot expect assistance on such a large scale, but nevertheless we do expect assistance and protection of some sort. Reduction in railway freights and protection by Customs tariff on similar imported lines would materially assist the industry here. I would like to see the Government set up an investigation committee composed of experts to "try out" New Zealand productions and to conduct experiments in a sympathetic way instead of displaying an antagonistic spirit, as is generally found in Government Departments throughout the Dominion. All things being equal, the Government should give a lead in supporting local industries. The general experience of commercial men in approaching Heads of Government Departments is that they not only expect New Zealand products to be equal to the imported lines, but unless they are much superior, and at the same time very much cheaper, they will not touch them. It is a well-known fact that the New Zealand Government is the hardest firm in the Dominion to do business with in supporting local industry. For the information of the members of the Committee I would like to point out that the patent laws in England, and also in the Dominion, are against us. It is not generally known that England lost the coal-tar colour industry because the trade in England was shut up for fourteen years by a master patent whilst no controlling patent had been sanctioned in Germany, so that any one could take up the manufacture there, the result being, of course, development in Germany and stagnation in England. So long as the Germans kept the British market supplied, which they took good care to do, nobody was at liberty to make the patented articles in England. During the war the patent restrictions were lifted, and England was allowed to manufacture these products according to the patents belonging to the Germans for the duration of the war; but what is going to happen when peace is declared? Will we still be allowed to use the patented processes, or will the patents again become the sole property of the Germans, and be workable in England and the colonies only on the payment of royalties or licenses? This matter has no doubt been carefully considered by the Law Advisers of the Government, but so far I understand no statement has been issued which makes this situation clear. An eminent German professor made the following statement early in 1914: "England talks now not only of holding her own in war, but of beating us in our chemical industries. She cannot do it, because the nation is incapable of the moral effort to take up an industry like that, which implies study, which implies concentration, which implies patience, which implies fixing one's eye on the distant consequences and not considering merely the momentary profit." That is a challenge that the British Empire cannot refuse to take up, but in taking it up let us realize that success can be achieved only by a more general appreciation of science by the cultivation and encouragement of chemical research in an enormously higher degree than in the past. With reference to what is now being manufactured in New Zealand, I may mention such products as disinfectants, carbolic acid, creosote, naphthalene, benzol naphtha, wood-stains, paints, enamels, sheep-dip, branding-fluids, horticultural sprays, insecticides, and various colouring-agents. All these products are made from coal-tar oils, which up till a few years ago were run down the drains as waste products. I venture to say that the whole of the requirements of the Dominion for these lines could be made in New Zealand if the industry was properly established. During the time the epidemic was raging in New Zealand practically the whole of the disinfectant used was