

GEORGE SCOTT, representing Scott Bros. (Limited), Engineers, examined. (No. 55.)

My reason for appearing before the Committee is to show the difficulty we have in securing efficient tradesmen to enable us to carry on the engineering industry. At present the industry is short of tradesmen; in fact, in a few years there will be no moulders in New Zealand except those who come from England. I do not think there are three apprentices in Christchurch—at any rate, there is no bound apprentice—and any boy we get remains for only a short time, perhaps twelve or eighteen months. Therefore we are not making tradesmen, and for that reason we cannot look to the engineering industry to flourish and increase. My firm is now employing fifty hands, and we had at one time three hundred. We have advertised for tradesmen and cannot get them. I think the remedy is that employers should give time off to their apprentices to receive instruction at the technical school or the School of Engineering. I know that employers in New Zealand are against this step, but the employers in England are in favour of it. The matter has been taken up in England, where it is looked on as one of the great reconstructive works to be carried out there. If we in New Zealand are to be successful with our industries the apprentices must have time off in the daytime to receive instruction. At present the time is not given in the workshop to instruct an apprentice. If time was allowed off in working-hours the cost to the employer would be £19 14s. over a period of three years, and the employer himself would get the benefit of it, because he would get a well-trained workman. Yet there is not an employer in Canterbury who approves of the apprentice getting time off to attend the school. I approve of it myself. It must be made compulsory to give time off. That was found necessary in England. There is hardly an engineering firm in New Zealand to-day employing the number of men he employed seven or eight years ago.

*To the Chairman.*] Attendance at a technical school should be made compulsory by law. We should feel our way carefully, because we have not the necessary instructors at present. My experience is that pupils from the local Technical School have been satisfactory. A boy should spend two or three years at the Technical School before going to Canterbury College.

*To Mr. Sidey.*] I think that employers ought to allow their apprentices to attend the Technical School two afternoons every week. As a compromise, I suggested to the Technical School and to the employers that apprentices should commence at 4 p.m. and end at 6 p.m.

*To Mr. Luke.*] The workmen are indifferent to the apprentices. In the fitting-shop a certain amount of time is given to the apprentices, but not the time that was given in the early days. If the foreman was specially asked to give the details of the technical side, apart from the manual work, he would not do it, because he has not the time. If apprentices went to the school in working-hours it would raise the general standard of labour, and eventually all the employers would benefit.

CHARLES CHILTON, Professor of Biology, Canterbury College, examined. (No. 56.)

The principal point I wish to stress is that of greater scientific knowledge and of pure science. At Wellington representatives of the New Zealand Institute explained what has been done in recent years—(1) to encourage investigation in pure science, or pure knowledge, apart from its application to industry; and (2) the connection between that knowledge and industry. In practically every country in the British Empire there has been established a Board of Science and Industry, and New Zealand is the only part of the Empire where a Board of the kind has not been established. The scheme set forth by the National Efficiency Board is on right lines. I suggest that you could also utilize the machinery of the New Zealand Institute more directly. The Institute represents scientific knowledge throughout the Dominion, and although the members of the Board of Governors are not those best qualified in particular branches of science they are in touch with those who are. I hope you will be able to do something to further the establishment of the scientific Board, which will be able to advise the Government on matters of a scientific nature. I also wish to put in a plea for what is called pure science—that is, the science that has not been applied. All the industries have developed from pure science. The question is, how are you going to promote greater scientific knowledge? It seems to me that you must begin at the primary schools, and follow it through the secondary schools, and so on. The great difficulty we have at present is the lack of workers who are qualified to carry out scientific research. Owing to the grants that have been made by Parliament through the Institute many scientific investigations have been started, but we have not a sufficient number of workers. We must keep our own students about the University colleges. In the meantime they go through their University course, but it has not been leading to anything, and if you can recommend some way that a greater amount of money should be given to colleges to employ a larger number of assistants to the various professors or lecturers it would be a matter of great value.

*To Mr. Sidey.*] I think the Government should make direct grants for research, but not for individual questions of research. That is not the best way to get at it, as it ties down the research person too much. We should make use as far as possible of the existing laboratories, which are capable of doing more work than they are doing at present. If the Government give a grant of £20,000 a year for five years it would meet the requirements of the colleges for the time being.

W. P. EVANS, Professor of Chemistry, Canterbury College, examined. (No. 57.)

I may say that Professor Easterfield and Professor Chilton have already dealt with a number of matters upon which I might have touched, and I agree with what they have said. As to the iron-ores of the Dominion, I think that in working the Taranaki ironsands we are not working at the best material. I consider it would be better to work at Parapara. I think the Committee should insist on a survey being made of the Taranaki ironsands, both in regard to quantity and quality. A thorough survey is necessary before people can be expected to put large sums of money