

request of the general manager of the Talisman Mine the time has been extended for another year.

New Zealand Research Scholarship for Otago: The scholarship for 1910, of the value of £100 a year, tenable for two years, was awarded to Mr. H. M. Budd, M.Sc., a graduate of the Otago Mining School, his subject of research being "The Limestones and Clays of Otago and Southland considered in respect of their Suitability for the Manufacture of Cement and for Agricultural Purposes."

Equipment.

The laboratory of the Department of Applied Mechanics is now well equipped with an Avery's testing-machine for testing materials in tension and compression, Avery's shot cement-tester with accessories, wire torsion tester, and a transverse cement-tester. All the machines are constructed after the latest models. The new apparatus also includes many working models illustrative of steam-engine construction and practice; various roof trusses; numerous models of iron joints and methods of riveting; apparatus for showing bending movements, reaction at points of support, and stresses in girders; reaction of jet of water; and hydraulic tank for showing flow from different kinds of apertures under a varying head.

During the past year there have been added to the equipment of the department of metallurgy two electrical motors, each developing about 2 b.h.p., a dynamo of 3.5 b.h.p., and a small electrically driven rock-crusher for the reduction of the samples of ore forwarded to the school for valuation. The gas-engine, rock-breaker, and berdan pan have been removed from the old experimental plant and re-erected in the basement of the new Mining School building, where they are conveniently situated for use and for class demonstration. The rock-breaker and berdan have been erected in such a way that they can be driven either by the gas-engine or by an electric motor. To the department of geology there have been added a powerful projection lantern and a Newton projection polariscope for the illustration of lectures.

Metallurgical Laboratory.

During the year 1910 the number of samples sent in for assay showed a considerable increase, being as under: Number of lots forwarded, 141; total number of samples, 267; number of separate estimations, 277. Besides these, about twenty samples were reported on for "Notes and Queries," in the *Otago Witness*. Of the foregoing samples the largest number were determinations for gold, but many scheelite-samples were forwarded for the estimation of tungstic acid. Other samples consisted of fireclays, phosphate rock, limestones, coals, iron-ores, bullion, &c. The majority of the samples were forwarded from Otago and Southland, but many were sent from the West Coast districts, whilst others came from the North Island, and from such distant places as the Philippine Islands and Fiji.

The work of the assay laboratory has greatly increased during late years, and there is no doubt that this department of the School of Mines is of growing value to the mining community. The necessity for assaying is becoming more and more obvious to miners and mining companies as time goes on. The scheelite industry finds the Mining School laboratory especially useful, since it affords mine-owners a means of quickly finding the value of their ores and concentrates. A small working model cyanide plant has just been completed for treating tailings experimentally, and it is hoped that it will prove of use to the mining community for the testing of small parcels of gold-bearing ore. The metallurgical department is under the supervision of Professor Waters.

During the year Professor Marshall examined and reported, free of charge, on some fifty samples and the Director on forty-three samples of rock. The examinations were in most cases made for miners, prospectors, and others interested in the discovery of minerals of economic importance.

Director's Visit to Europe.

During the summer vacation the Director visited many of the leading mining schools and mining regions in Victoria, South Australia, Western Australia, Tasmania, Germany, France, Belgium, and Great Britain, with a view of collecting information in respect of recent advances in mining education, and of observing and noting improvements adopted in up-to-date coal and metal mining practice. As a result of his observations he acquired much useful data, and found, generally speaking, that the curriculum of the Otago School of Mines was well abreast that of the best European and Commonwealth schools. In geology and surveying the standard was higher than in the corresponding courses in the Commonwealth. Old graduates of the Otago School were found occupying responsible places as directors and teachers in mining schools and universities, as consulting engineers and mining geologists, as mining engineers, general managers of mines, mine-managers, and metallurgists in all parts of the Empire that were visited.

UNIVERSITY MUSEUM.—REPORT OF THE DIRECTOR (W. B. BENHAM, Esq., D.Sc., M.A., F.Z.S.).

The Hocken Collection.

Reference was made in my last annual report to the progress that had been made in the installation of the library and pictures, and to the formal opening of the wing by His Excellency the Governor, though in reality the matter belongs to the current year. The illness which prevented his attendance at that ceremony ended, as we are aware, by Dr. Hocken's death on the 17th May, 1910. The great respect in which he was held was evinced by the widespread regret at his loss. The Curator especially feels his loss, for Dr. Hocken had always shown great interest in the Museum, long before the idea of presenting to it his library had become crystallized. The Museum is now indebted to him and to his widow for the gift of the doctor's well-known and