

EDUCATION SQUARE.

II.—SCHOOL OF MINES AND INDUSTRIES.

A VALUABLE INSTITUTION.

[By our Special Reporter.]

An honourable place of great usefulness among the educational institutions of South Australia is filled by the School of Mines and Industries, which has just recently attained the twenty-first year of its existence. Technical instruction of the rising generation is held to be essential not only to the prosperity, but to the very existence of the producing and manufacturing interests of a community, and the School of Mines and Industries came into being at a time when South Australia, if the provision of such opportunities were neglected, threatened to get behind in the race of technical handicrafts and activities generally. One evidence that the State has not done so, however, may be cited in the great 1910 Chamber of Manufactures Exhibition now being held adjacent to the school, through whose classes thousands of students have passed in the successive years, and are now putting into good use in their daily avocation much



THE PRESIDENT
(Sir Langdon Bonython).

of the practical knowledge and technical skill acquired at the institution. If it were a case of bestowing praise wherever praise was due, the School of Mines and Industries would surely be entitled to no mean share of credit for the part it has taken in the training of South Australian professional men, craftsmen, and artisans.

—Origin of the School.—

As the result of strong public opinion, the Downer Government in 1886 appointed a board "to enquire into and report upon the best means to develop a general system of technical, including agricultural, education." This board consisted of Dr. Cockburn, M.P. (then Minister of Education), the Hon. Alan Campbell, M.L.C., Professor Rennie, Messrs. Basedow, Rees, and Scherk, M.P.'s, Mr. (now Sir) Langdon Bonython, and Messrs. A. Adamson and J. Fairfax Conigrave. The establishment of a School of Mines having been made a portion of the Playford's Government's policy, consideration of how this object could be best carried out was referred by the late Mr. J. C. F. Johnson (as Minister of Education) to the Technical Education

board, which in June, 1888, recommended that a School of Mines and Industries should be established. At the same time it furnished much valuable information obtained through visits to similar institutions in the neighbouring States. At the beginning of 1889 steps were taken to organize classes and start work with as little delay as possible. Dr. Cockburn was appointed President, and to his personal efforts was due much of the progress made.

—A Policy of Alliance.—

In the first report of the council it was stated that the policy adopted had been one of alliance. Wherever possible the facilities afforded by existing institutions for the education the school specially aimed at had been utilized with the object of avoiding duplication of work. Students had attended the University and the School of Design, and in association with the Chamber of Manufactures free popular lectures had been conducted. The Government had handed over to the council the eastern annexe of the Exhibition Building (at that time only a recent structure), and in it classrooms were provided and the nucleus of a museum placed. Actual teaching began in March, 1889, although it was not until June 8 of the same year that the Governor (Lord Kintore) performed the opening ceremony in the presence of a representative gathering of citizens. In July, owing to Parliamentary duties, Dr. Cockburn resigned from the office of President, and the council appointed Sir Langdon Bonython to the position, which he has ever since held.

—Fees Lowered as Students Increased.—

In the initial term the number of students was 91, but it increased to 348 by the end of the year, and continued to

grow, notwithstanding insufficient room, and somewhat uncongenial surroundings, particularly in the basement of the Exhibition Building. The first balance sheet indicates that the Government grant during 1889 was £3,000, and the sum has been since augmented. For the latest financial year it was about £5,400. Fees collected in the first year amounted to £1,046, while in 1909 they totalled £2,828. Meanwhile the number of students had increased to 1,657, not including girl pupils of the public schools, who were instructed by members of the staff in various branches of domestic economy. From this it will be seen that the fees derived have not grown in proportion to the number of students, which is due to the policy of reducing the charges so soon as the success of a new class established was assured, and the attendance at it a sufficient guarantee that it was meeting an educational requirement.

—Organized Associateship Courses.—

Subjects taught at the beginning included mathematics, mechanics, chemistry, drawing, mineralogy, geology, assaying, metallurgy, carpentry, fitting and turning, pattern making, and domestic sciences. The original intention, as indicated by the prospectus issued in 1890, was to offer the diploma of associate of the school after due examination in any one of the following departments:—Applied chemistry, geology and mineralogy, assaying and metallurgy, mining, mechanical engineering, and electrical engineering. Developed out of that scheme there are now organized associate courses in mining, metallurgy, and mechanical and electrical engineering. In addition an associate course has lately been established in architecture, but it is only in its infancy, as students who have undertaken it are as yet in the elementary stages of study.

—Agreement with the University.—

In 1903 an arrangement was made between the councils of the School of Mines and the University, which provided that, with a view to avoid duplication of work and expenditure, the two institutions should unite in providing courses of instruction and examination in all subjects which should qualify for a fellowship of the School of Mines on the one hand and a University diploma in applied science on the other. The new diploma courses were of a more academic character than the already established associate courses of the school.

—A Comprehensive Curriculum.—

From its establishment the institution has been—in addition to a School of Mines—the headquarters of all branches of technical education. The lecturer in metallurgy, assaying, and chemistry is Mr. A. J. Higgin, F.I.C., assisted by Mr. S. D. Schild. Mechanical engineering, machine design, and applied mechanics are under the direction of Mr. W. H. Ledger, B.Sc., M.C.E., who has the assistance of Mr. F. Ellis, B.Sc., F.S.A.S.M. Other instructors are:—Mr. P. Motteram, A.S.A.S.M., electrical engineering; Mr. J. Dalby, B.A., mechanics and physics; Mr. H. W. Gartrell, B.Sc., mining and ordressing; Mr. A. Ferguson, B.Sc., mineralogy; Mr. Spencer Williams, woolclassing; Mr. J. D. T. Walters, fitting and turning; Mr. A. Tilley, carpentry, joinery, and pattern making; Mr. M. M. Middleton, mechanical drawing; Mr. W.

H. Bagot, A.R.I.B.A., architecture; Mr. P. Barbour, accountancy and bookkeeping; Mr. G. Morton, plumbing; Mr. B. Morris, tailor's drafting; Mr. P. McCabe, tailoring; Miss E. Foster, assisted by Miss O. M. Laffer, dressmaking; Miss J. Barron, assisted by Misses Cornish and Roy, domestic economy, cookery, and laundry work; Mrs. I. Ballantyne, millinery. Some years ago the Government decided to do away with the institution known for a considerable period as the Agricultural School in Adelaide, and the School of Mines Council took over the staff and students, and reorganized them as a preparatory school for the purpose of equipping the boys with knowledge in readiness to undertake the higher courses of the institution. The head master is Mr. A. Ferguson, B.Sc., who is assisted by Messrs. J. P. Willmott, B.Sc., and A. W. Collins, and Miss A. C. Small.

—A Noble Building.—

For about 14 years the work of the School of Mines was carried on in the dark and cheerless basement of the Exhibition Building, and the need was urgently felt for better accommodation. The Kingston Government, of which the late Sir Frederick Holder was Treasurer, had undertaken to provide £10,000 as the first instalment of a building grant when in 1899 the Hon. G. Brookman made a magnificent donation of £15,000 for the same purpose. The sum was further subsidized by the Jenkins Government, and in February, 1903, the present fine structure was completed. The main building, which cost £37,115, was carried out in the Perpendicular Gothic style of architecture, with features which ally it

to the late Tudor period, and greatly enhances the group which comprises the city's Education Square on North terrace. It has been described as "a monument of the good taste and skill of the department over which Mr. Owen Smyth presides." The building consists of four stories, including the big assembly room, named the Brookman Hall, in recognition of that gentleman's practical support of the cause of technical education in South Australia. The new building was declared open by the Lieutenant-Governor (Sir Samuel Way, Bart.) on February 24, 1903.

—More Laboratories.—

Although the new premises formed a spacious addition to the accommodation available for the school, no provision had been made for the teaching of metallurgy, and the assaying students still remained principally in the subterranean vaults of the exhibition. The inconvenience occasioned by their distance from the main building of the school, and the totally unsuitable nature of the rooms, led Sir Langdon Bonython to give £1,500 toward providing up-to-date metallurgical and chemical laboratories. The Government handsomely subsidized the President's gift, and plans were drawn up for a new building to cost £5,300. It was formally handed over to the council by the late Hon. T. Price, Premier and Commissioner of Public Works.

—Woolclassing and its Value.—

The establishment of wool-sorting classes in 1897 was an important step in the history of the school, as out of it has grown the system of practical instruction, in pursuance of which the students handle the wool at various sheep stations. Mr. George Jeffrey was the first instructor, and he originated the system, which at that time was peculiar to South Australia, and is now being copied elsewhere. The value of this practical instruction in the country can hardly be over-estimated, first of all, as the

students could in no other way possibly learn the whole business; and, secondly, in relation to the advantage gained by small as well as large wool-growers. In order to provide accommodation at the school for the new classes the late Mr. J. H. Angus gave £1,000, half of which sum was devoted to building a special room, and the balance to the construction of a model wool scouring plant and the varied equipment of a wool laboratory, which was formally opened in April, 1908. The President, on the occasion of the ceremony, stated that he was told, and had no reason to doubt the statement, that the operations of the school's wool classes, directly and indirectly, had added to the wealth of South Australia in hard cash a sum far larger than the total expenditure, from its origin to the present time, on the Adelaide School of Mines and Industries. That was in the highest degree satisfactory, and a wonderful tribute to the value of technical education.