

1895.

NEW ZEALAND.

EDUCATION: THE CANTERBURY COLLEGE

(PAPERS RELATING TO).

[In continuation of E.-7 1894.]

Presented to both Houses of the General Assembly by Command of His Excellency.

ANNUAL STATEMENT OF THE CHAIRMAN OF THE BOARD OF GOVERNORS.

At the annual meeting of the Board of Governors of Canterbury College, held on Monday, the 8th July, 1895, the Chairman's statement of the progress made and the work done in the several departments during the year was read, as follows:—

THE COLLEGE.

The meeting of the Board held on the 9th July, 1894, was the twenty-first anniversary of this institution. Mr H. R. Webb was at that date elected Chairman for the year. During the past year several changes have taken place on the Board, Messrs. John Grigg, A. E. G. Rhodes, and H. F. von Haast having for various reasons resigned their seats. These were all valued members in their respective departments. Mr Grigg's special knowledge in the subject of agriculture was always at the service of the Board, and it was at the special request of members that he retained his seat for some time past. Mr A. E. G. Rhodes, contemplating a visit to England, sent in his resignation. Mr. H. F. von Haast left the colony, and is now in practice at the Melbourne Bar. These vacancies have been filled by the election of the Rev Canon Harper, M.A., and the Rev Gordon Webster, M.A., and the re-election of the Hon. E. C. J. Stevens. At the beginning of the session of 1895, Professor J. Macmillan Brown resigned the chair of English language, literature, and history. The professor has been connected with the College since his appointment in the year 1874. He was in point of time the second professor appointed on the College staff. At first he occupied the position of professor of classics, history, and English literature. In 1880 a special professor of classics was appointed. Professor Macmillan Brown brought to bear on the duties of his office great enthusiasm and industry. It may well be said that the success of the Canterbury College in those early days was in a great measure due to the untiring zeal and ability displayed by the professor. During the long period of his service, extending over more than twenty-one years, he laboured assiduously to advance the interests of the institution, and at the same time displayed a deep personal interest in the advancement of each individual student. On his arrival to enter upon the duties intrusted to him, the College practically was non-existent, except in so far as the classes in chemistry were concerned. The many initial difficulties overcome, the number that have attended the classes, and the numerous successes obtained, may well gratify the retiring professor. On the receipt of his resignation, the Board unanimously passed the following resolution: "That the Board of Governors of this College, having received from Professor J. Macmillan Brown his resignation of the chair of English literature and history owing to his failing sight, wishes to place on record its appreciation of the valuable services rendered by the professor, and the sincere regret with which his resignation is accepted." With the view of obtaining a successor, the Board has appointed a Commission in England, consisting of the Agent-General and Mr Kennaway, together with Professor Dowden, Trinity College, Dublin, Professor Masson, Edinburgh, and Dr. Edward Caird, Master of Balliol, and has empowered them to select and appoint a Professor of English literature and history for the college. The salary has been fixed at £600 per annum. The Board has recently decided that the professors and lecturers on the staff of the College should no longer be remunerated for their services partly by salary and partly by fees derived from the attendance of students at lectures, but that they should receive from the College a fixed annual salary independent of any fluctuations in the number of those attending classes. With this object in view, the Board has given the professors of chemistry, mathematics, and classics the option of accepting fresh appointments to the chairs at present occupied by them on the basis of receiving a fixed annual salary of £900, irrespective of fees from students, the appointments to be subject to twelve months' notice on either side. These proposals have already been accepted by the professor of chemistry. The number of matriculated and non-matriculated students who have attended lectures during the academic year, from March to November, 1894, is as follows: Matriculated, 185, non-matriculated, 141: total, 326.

The following shows the gradual increase during the last three years in the total number of students of this College who have obtained degrees in the University of New Zealand 1893, 144, 1894, 167, 1895, 188.

The number of students attending each lecture during the last term was as follows:—

Classics.—Pass Latin Translation, 36, composition, 49. Greek Translation, 7, composition, 7. Honours Latin Translation, 8; composition, 8.

English Literature.—Pass lectures Literature of 1800 to 1850, 57, language of Milton, Shelley, and Carlyle, 56, composition, 82, essay class, 58, art of Milton, Shelley, and Carlyle, 62. Honours lectures Philology, 46, criticism, 36.

History.—(Sixth to Fourteenth Century), 31.

Mathematics.—Pass lectures Pure mathematics, 42, mechanics and hydrostatics, 18. Honours lectures Section I., 6, Section II., 5, Section III., 3, Section IV., 1, elementary mechanics and hydrostatics, 6.

Chemistry and Physics.—Pass chemistry, 12, honours chemistry (organic), 5, teachers' chemical physics, 2, pass physics, 14 practical physics (teachers'), 3, practical physics, 19, honours physics, 6, elementary science (teachers' E and D), 38, laboratory practice (chemical), 21.

Geology.—Junior, 8, senior, 9.

Biology.—General biology (Part I.), 14, botany (Part I.), 6, zoology (Part II.), 5, laboratory work, 18.

French.—Pass lectures Composition, 39, authors, 22, grammar, 18, literature, 24. Honours lectures Composition, 1, authors, 2, essay and literature, 6, philology, 6, literature, 2.

German.—Pass, 2, honours, 1.

Jurisprudence and Law.—Pass jurisprudence, 20 honours, 6, constitutional history, 19, LL.B. (2nd section), 4, LL.B. (3rd section), 3.

Music.—Rudiments of music and harmony (first-year students), 25, harmony (intermediate second-year students), 12 harmony (intermediate second-year students) evening class, 7, harmony (intermediate third-year students), 11, harmony and counterpoint (advanced), 5.

Twelve students from the College have this year obtained the degree of M.A. J. A. Erskine gained, at the same time, first-class honours in mathematics and first-class honours in physics, W. H. Dawson, first-class honours in chemistry, and J. Hight, first-class honours in languages and literature (English and French), and C. A. Craig, second-class honours in mathematics, A. T. Ngata and A. Dunn, second-class honours in political science, Misses J. W. Inglis, K. Isherwood, and B. P. Richmond, second-class honours in languages and literature (English and French), and A. J. Buchanan, second-class honours in languages and literature (English and Latin), and Miss E. M. Baber, third-class honours in languages and literature (English and French), and Miss E. R. Broome, third-class honours in languages and literature (English and Latin). Twenty-one students of the College have passed the final section of their B.A. examination. Misses C. A. Barnicoat, L. E. Bing, A. M. Fordham, E. V. von Haast, G. H. Johnston, M. M. Kebbell, C. I. Locking, J. Mulholland, M. E. Oswin, A. E. J. Spencer, F. H. Bakewell, H. O. Craddock, G. Dalglish, A. Gray, G. J. Lancaster, C. E. Mackay, P. Menzies, F. J. Rolleston, J. M. Waddell, F. D. Waller, and H. Williams, whilst twenty-seven have passed the first section of their B.A. examination. Misses E. Campbell, J. Currie, L. Gibson, E. Graham, K. Gresson, C. R. Kirk, M. E. Lawrell, B. Martin, T. Max, C. B. Mills, M. Williamson, E. G. Atkinson, S. A. Atkinson, W. D. Bean, A. E. Flower, C. W. Garrard, A. G. Henderson, K. Kippenberger, F. Milner, T. A. Murphy, T. R. Quill, A. W. Shrimpton, J. Sutherland, J. Waddell, A. H. Wall, J. Williamson, and W. Wilson. E. Rutherford, M.A., and E. S. Buchanan, M.A., also obtained the degree of B.Sc. J. Innes, M.A., obtained the degree of LL.D., and D. Bates, A. Dunn, A. R. Kirk, and C. P. Knight, that of LL.B. T. A. Murphy also passed the first section of the LL.B. examination, and A. G. Muir passed the first section of the B.Sc. examination, whilst he and A. R. Craddock passed the first section of the B.Sc. (engineering) examination, T. R. Burt the second section, and G. A. Julius and J. Parr the third. G. Lancaster gained the senior scholarship in mathematics, A. Gray that in physics, and H. O. Craddock, that in Greek. A. G. Henderson gained the Bowen prize for 1894, for an essay on "The Causes of British Success in the Rivalry with Other Powers for Supremacy in India." The College exhibitions, given for excellence in honours work at the College annual examinations, were awarded as follows. For Latin, J. M. Waddell, for English, Miss J. Mulholland and F. J. Wilkes, equal; for mathematics, C. E. Mackay and G. Lancaster, equal, for experimental science, G. Lancaster and A. Gray, equal, for natural science, Miss M. E. Lawrell; for German, Miss E. V. von Haast. C. A. Pemberton passed the intermediate medical examination. The graduates of the University of New Zealand who have been educated at the College now number 188, eighty-four of whom have obtained the degree of M.A., ninety-six the degree of B.A., six that of LL.B., and two that of B.Sc. Nine arts graduates have also obtained the degree of LL.B., eight that of B.Sc., and two that of LL.D. Of the Masters of Arts, four gained double first-class honours, one a double first-class and a second, one a first-class and a second, one a first-class in arts and a second-class in science, thirty-three first-class honours, two double second, twenty-six second-, and fifteen third-class; and of the Bachelors of Science one gained second-class. Thus, out of 422 who have taken degrees in the University of New Zealand (exclusive of medical degrees, for which this College cannot enter candidates), 188 belong to Canterbury College, out of the 176 who have taken the M.A., ninety-three belong to it, and of the sixty-six who have taken first-class honours, forty-one belong to it. Of the 113 senior and third-year and John Tinlin scholarships awarded by the University of New Zealand during the last eighteen years—the period during which the present scholarship regulations have been in force—seventy have been awarded to students of Canterbury College. Of the twenty Bowen prizes which have been awarded by the University for an essay on a subject connected with English History, and open to all undergraduates of the University of New Zealand, fourteen have been gained by students trained in

this College, whilst the only three mentioned as *proxime accessit* have also been of this College. The title of "Professor" has been adopted for the gentlemen in the full charge of the departments of modern languages, biology, and engineering.

Biology.—With a view to obtaining the ruling of the Supreme Court as to the extent of the powers vested in the Board in connection with the endowment for the Medical School, a petition was presented to his Honour Mr Justice Denniston. The judgment was clear and affirmed that the endowment could be made available for the erection of buildings, the purchase of apparatus or fittings, or for the payment of salaries of those connected with the biological department. A tender for the erection of a biological laboratory and observatory tower, at a cost of £3,004 14s. 1d., has been accepted by the Board. The building is well in hand, and its completion may be looked for towards the end of the year. Sufficient accommodation will thus be provided in this department for biological students for some years to come.

An inquiry into the department of chemistry and physics has taken place during the year. The investigation was costly and prolonged, but, the report of the Special Committee not having been adopted, no changes have resulted therefrom. The most interesting portion of the inquiry centred round the expediency or otherwise of detaching the subject of physics from that of chemistry. Until such time as the funds at the disposal of the College permit of the erection of a physical laboratory, and its equipment, and of a separation of the two subjects of chemistry and physics, matters must remain in an unsatisfactory condition. The professor in charge of the department is already urging the immediate appointment of a trained physical assistant, and the erection of a physical laboratory. The subject is one of great importance to the welfare of the College, and will, ere long, force itself upon the earnest attention of the members of the Board. Examinations for exempted students have been held during the year at Wellington, Nelson, Napier, and Wanganui. An examination in music was again held at Timaru, when twelve candidates attended.

Music.—Sixty students are attending the lectures. The numbers attending each series of lectures are given above. Eighty-one candidates sat for examination in music, a very great increase in numbers over any previous year. They were divided as follows (1) First year (junior), 36 candidates, (2) second year (intermediate), 24, (3) third year (senior), 18. Three advanced students also sat for examination on their work of the year.

School of Engineering.—The report of the professor in charge is attached.

GIRLS' HIGH SCHOOL.

The new lady principal, Mrs. T. S. Foster, took charge of the school on September 13th, 1894. Since the beginning of the present year another teacher has been added to the staff, Miss H. Davy, B.A., otherwise the teaching-power is unaltered from last year. The number of pupils attending the school last term was 138, with very large classes in cooking and dress-cutting, the latter subject, indeed, being so popular that the teacher, Miss Keating, has been engaged for two extra classes. The swimming classes were well attended during the season, and produced satisfactory results. The examiners in the foregoing subjects, as well as those in drill, drawing, singing, and the general course of the school work, reported well in every case of the various classes. Four candidates from this school sat for the Junior University Scholarship examination; three gained scholarships, while the fourth took a good place in the honours list. Ten girls also sat for the matriculation examination, all of whom succeeded in passing it. Since the close of the last term of 1894, the school buildings have undergone some minor repairs, and have been painted throughout. Some arrangements and fittings have also been provided for the practical teaching of physics in the school.

BOYS' HIGH SCHOOL.

There have been no changes in the staff this year, with the exception that the whole of the freehand drawing, as well as the geometrical, has been placed under the charge of Mr S. Hurst Seager. Model drawing is now taught in the School of Art by the School of Art masters. The school workshop has been reorganized by Mr Hurst Seager and put on a new basis, a systematic course in the use of tools and a working drawing being required from each boy before he can make articles for his own pleasure. The number of pupils attending last term was 247; the number at the same time last year was 238. The Board last year was considering the question of enlarging the school, and early in the present year, the consent of His Excellency the Governor having been obtained to the outlay, decided to extend the front of the school westwards by the erection of a lecture-room on the ground-floor and two class-rooms above, with some basement accommodation for laboratory work, &c., at a total cost, including architects' fees and all charges, of about £2,000. These additions are now in course of erection, and will be completed about the end of October. Mr. W. Walton was accorded leave of absence for the third term of last year, owing to illness, and returned the first term of this year greatly improved in health. At the University December examinations, E. Cull, F. Fantham, and H. Maddison obtained places on the "credit" list. E. Cull won the entrance exhibition at the School of Engineering, and was awarded the school-leaving exhibition. Eleven boys passed the matriculation examination. H. Craddock obtained the Senior University Scholarship for Greek, and G. Lancaster for mathematics. A. G. Henderson obtained the University "Bowen Essay" prize. A. R. Kirk and D. Bates obtained the degree of LL.B. W. H. Dawson obtained his M.A. degree with first-class honours in chemistry and A. J. Buchanan his M.A. with second-class honours in Latin and English. A. C. Sandstein has passed his first professional examination in medicine at Edinburgh University, with distinction, winning first medals in zoology, botany, chemistry, and physics. M. Keane, C. Hampton, and S. Robertson won three out of the five senior scholarships awarded by the North Canterbury Board of Education. A. Sims obtained the second place in order of merit among those who passed with distinction in the Senior Civil Service examination. Three others passed the Senior and nine the Junior Civil Service ex-

amination. The reports sent in by the examiners in the annual school examination in December were very satisfactory

MUSEUM.

The annual report of the Curator of the Museum is attached. He may be congratulated on now having compiled and issued a guide-book for the use of visitors. The report announces a valuable discovery of moa-bones and various additions to different departments of the Museum. Notwithstanding the regular employment of a night-watchman, a robbery of gold and specimens has lately taken place. A man has been arrested by the police on a charge of being concerned in the robbery, and will be brought before the Stipendiary Magistrate to-morrow

SCHOOL OF ART.

At the annual prize distribution, held on the 7th of February the Art Master delivered a statement respecting the work of the department for the year ending December 1894. An account of the meeting was published at the time. Previously the annual report has embraced the work of the last two terms of one year and the first term of the following year. It has now been arranged that the report shall include the three terms of the one year. The numbers attending the morning class have been as follows :—

	First Term.	Second Term.	Third Term.
1893	28	31	32
1894	32	35	32

The numbers attending the evening class were :—

	First Term.	Second Term.	Third Term.
1893	85	90	91
1894	115	108	93

Mr. S. Hurst Seager, the lecturer and instructor in architecture and decorative design, in December completed his first year's work with very encouraging results. Life classes have been regularly held for the study of the draped figure and of the nude. The annual exhibition of students' work, held in February was fairly successful, and all branches of art were well represented. The annual second-grade examinations were held in December last. At the same time a similar examination was again held at Timaru. The results compared with the previous year are as follows :—

	Freehand.	Model.	Geometry.	Perspective.	Full Second-grade Certificates.
1893	78	85	14	7	6
1894	90	72	22	13	11

Forty students attended from the Normal School during the period under review

The Education Board of the district of North Canterbury has withdrawn the annual subsidy of £80 paid for some time past to the School of Art for giving instruction in drawing to the students of the Normal School. The students requiring to attend the school now join the ordinary classes. Messrs. Strange and Co., A. J. White, Whitcombe and Tombs, and others generously offered prizes for competition. Mr. Woodhouse, of Sydney, Professor Scott, of Canterbury College, Messrs. Van der Velden, and Mountfort kindly acted as judges in the various subjects without remuneration.

THE PUBLIC LIBRARY

During the year the Treasury paid over to the Library Department the sum of £155 16s., which had been voted many years ago by the Provincial Council for library purposes. This sum was deposited in one of the banks, and has remained in an official account since the year 1875.

Reference Department.—The large daily attendance in this department shows how much the increased accommodation was needed, and how it is appreciated by the public. The loss and damage to the books has been less than in any previous year only two works having been stolen—viz., “The New Zealand University Calendar, 1893–94,” and “Stray Leaves from the Early History of Canterbury” Some valuable books have been at different times purchased at auction. A new catalogue is in course of preparation, but will take some months in compiling. During the year 316 books and pamphlets have been added, bringing the total number of volumes up to 9,431. The following donations have been made to this department “History of the Tower Bridge,” by Chas. Welch (1894), presented by the Corporation of the City of London, “New Zealand and its Aborigines,” by W. Brown (1845), presented by P. Haultain, Esq., “Captain Cook's Journal during First Voyage round the World” (1893), presented by John Tinline, Esq., “Fairest of the Angels,” by Mary Colborne-Veel (1894), presented by J. V. Colborne-Veel, Esq. “Theory and Practice in Perspective,” by Thomas Malton (1776), presented by J. Spiller, Esq. “The Key to Theosophy,” by H. P. Blavatsky (1893), presented by the New Zealand Theosophic League; “Ocean of Theosophy,” by W. Q. Judge (1893) presented by the New Zealand Theosophic League, “Echoes from the Orient,” by W. Q. Judge (1893), presented by the New Zealand Theosophic League, “A Protest against Agnosticism,” by P. F. Fitzgerald (1890) presented by Mrs. Fitzgerald, “Principle of Sufficient Reason,” by Mrs. P. F. Fitzgerald (1887), presented by Mrs. Fitzgerald, “Christendom Astray,” by R. Roberts (1890) presented by P. Gorton, Esq., “Annotated Paragraph Bible,” presented by the Religious Tract Society, “Geological Survey of United States” (1890–91), two vols., (1892–93) three vols., presented by the Smithsonian Institution.

Circulating Department.—This department was closed from the 24th December till the 5th January for stocktaking and alterations. It was found that the number of volumes missing amounted to 549. On reopening a trial was made of the “close-shelf system” of issue, by which the subscriber selected his book from the catalogue, but it was met with such general disapproval that on the 31st May the department was again closed for alterations. So far the present system has worked well, and it is to be hoped that the subscribers will aid the staff in detecting any irregu-

larities, and in protecting the property of the Board. The necessity of fixing a certain date in each year for closing, stocktaking, and examination of books is apparent, it being impossible, with the "free access system," to keep anything like a check as to the number of books missing and their general condition. It need not necessitate the books being called in, though it is the practice in large circulating libraries in England and Australia. A full catalogue to the contents of this department was completed in April, and is now obtainable by subscribers, 56 magazines and papers are taken in, 379 volumes have been added since the 1st January, and 108 volumes have been taken off the shelves as being unfit for issue. The total number of volumes in this department is 15,696, made up as follows: History and politics, 1,162; biography, 1,259; travels, &c., 1,515; architecture, 301; fiction, 7,536; classics and literature, 941; poetry and drama, 342; geology natural history, science, and botany, 784; magazines and miscellaneous, 1,856. The subscribers now number 1,340.

Reading-room.—The necessity for increased accommodation in this department is apparent. The following papers are taken in: English, 6; Irish, 1; Scotch, 1; American, 1; Australian Colonies, 9; New Zealand, about 37; magazines, 15.

SCHOOL OF AGRICULTURE.

The members of the Board of Advice retiring by rotation are Messrs. H. Overton and W. Boag, and they are eligible for re-election to-day. The Chairman and members of the Board of Advice have been untiring in their efforts to promote the advancement of the School of Agriculture. A Special Committee has lately brought up a report as to the feasibility of enlarging the scope of the Lincoln College, and widening its sphere of usefulness. During the year the institution has been connected with the Telephone Exchange.

APPENDICES.

1. REPORT OF THE PROFESSOR IN CHARGE OF THE SCHOOL OF ENGINEERING AND TECHNICAL SCIENCE.

I have the honour to report on the work of the past year of the department under my charge. The number of students attending has increased from fifty-one to sixty-two, and the number of hour attendances per week from 254 to 308. Six matriculated students sat for the University examination in engineering. Five passed in their respective years, the sixth passing in the technical, but failing in the collateral subjects. Fourteen students obtained the College certificate in freehand mechanical drawing, eight in mechanical drawing, five in descriptive geometry and setting out work, six in steam, and one in applied mechanics. Since the foundation of the department 192 names have been placed on its books, 130 persons having completed courses of varying lengths. Of these, starting in nearly every case from the level of apprentices, two have attained to the position of engineers in charge of undertakings of magnitude, two that of works manager, two are lecturers and one a demonstrator in the service of the Board, nine are draughtsmen, four surveyors and draughtsmen, five shop foremen, eight engineers of sea-going vessels, five engineers of freezing-works, pumping-stations, &c., eight chargemen or leading mechanics, eight are in business on their own account. Fifty-four thus occupy positions of responsibility in England, Australia, and the colony; fifty are working at their trades as skilled mechanics, the remaining twenty-six being made up of those whose present whereabouts are unknown, or who have turned to other occupations. Such results form a complete answer to the question which has been raised as to the future employment of engineering students, and account for the steady increase of attendance which has been characteristic of the history of the technical school. I must, however, remind the Board that the department cannot be considered as fully equipped for modern requirements until provision has been made for a section of electrical engineering, the arguments in favour of which, advanced by me in 1890, apply with still greater force to-day.

The Engineering Laboratory.—The erection of the testing machinery is nearly completed. The testers supplied by Messrs. Buckton and Co. are of excellent workmanship, and my special requirements have been faithfully complied with. The capacity of the plant is unexcelled by that of any of similar size. The main tester is capable of dealing with the most delicate test piece, or with full-sized girders, ties, or struts. The value to the country of a plant by which the physical properties of its timbers, stones, other building materials, and manufactured products can be accurately ascertained can hardly be over-estimated, especially in connection with the instruction of those who will hereafter be called on to deal with them in constructive work. I have again to express my thanks for assistance to the officers of the New Zealand Government Railways and the various engineering firms of Christchurch, also to the members representing Canterbury in the General Government for valuable assistance rendered me in obtaining the remission of the duty on the experimental engine and testing plant.

ROBT. J. SCOTT,
Memb. Inst. Me. Eng., and Memb. Inst. C.E.,
Professor of Engineering.

2. REPORT OF THE CURATOR OF THE MUSEUM.

I have the honour to submit my report on the work done in the Museum during the past year. In November last a discovery of moa-bones was made near Waimate, and the Museum secured the right of digging for them. Mr. W. Sparks, the taxidermist, was sent to superintend the excavations, and the result was one of the largest collections of bones ever obtained. Not only has our collection been much enriched by well-preserved bones, but there are many duplicates for disposal. Exchanges have been made during the year with the Museums of La Plata, Sydney and Auckland, and also with Dr. F. Krantz, of Bonn, Professor H. Ward, of New York, Dr. Koehler, of Lyons, and Dr. Thomas, of Paris. Others are in course of arrangement. The additions to the geological

collections are casts of *Plesiosaurus* and *Brontornis*, a number of Australian fossils, and relief maps of the Uinta Mountains, the Hartz Mountains, and the Island of Palma. In the zoological rooms the birds and corals have been rearranged, and a large number of labels have been printed. The additions are albatrosses from the North Pacific, several skeletons of birds, and a collection of sponges—the last presented by Professor A. Dendy. The archaeological collections have been rearranged. The chief additions are a relief map of Palestine, a cast of the Black Obelisk of Shalmanesur II., and a pile from a Swiss lake village, presented by Mr J D Enys. The Society of Arts removed their pictures last February, and their place has been supplied by a number of casts of Egyptian and Assyrian sculptures obtained by purchase from the British Museum. In the ethnological room the principal additions are wood carvings from Burmah and India, and a pocket chronometer used by Captain Thomas, which was bequeathed to the Museum by the late Thomas Cass, Esq. Unfortunately the Museum was broken into last May, and some gold specimens, diamonds, and a gold Irish torque—which had been presented by Mr. Lancelot Walker—were stolen. A large number of printed labels have been placed in the cases in this room. The New Zealand collections have been increased, in addition to the moa bones already mentioned, by the skeleton of a cowfish (*Tursio tursiops*), presented by Pope Brothers, of Governor's Bay; the skull of a sea elephant, purchased, a skeleton of *Dinornis maximus*, presented by Mr C. A. Ewen, several bird-skins and skeletons, and a collection of fresh-water fishes of the Chatham Islands, presented by Major Gascoyne. A great improvement has also been made by placing the moa skeletons in a glass case. In addition to the usual donations to the library from scientific societies, the following books have been added. By purchase, Fowler's British Coleoptera and Quatrefage's *Histoire Naturelle des Anneles*, by presentation, Cuvier's *Ossmens Fossiles*, from Lady Von Haast. All the cases throughout the Museum have been numbered and a guide book has been printed and is now on sale in the Museum.

F W HUTTON, Curator

3. REPORT OF THE DIRECTOR OF THE SCHOOL OF AGRICULTURE.

I have the honour to submit my report on the work done at the School of Agriculture, and on the stock, and condition of the farm, for the year ending 30th June, 1895.

School.—The number of students for the last term of 1894 was forty-four, and for the present term forty-nine, two being non-resident. There are also seven awaiting admission in January, 1896. The cost of maintenance (which includes servants' wages, laundry-work, fuel, lighting) for each student and member of the teaching staff is £39 10s. 3½d., being somewhat lower than last year owing to the increased number of students and that wood grown upon the farm is being used for fuel instead of coal. The final certificate granted by the College has been gained by James William McCrostie, Greendale, George Hepburn Stewart, Dunedin, William Waddell, Oamaru; Harold Withy, Auckland, Edward Teesdale Bramston Worthy, Christchurch, Stewart and Worthy having passed with great credit. The annual certificates given to those standing highest in the different subjects of instruction have been gained by G. H. Stewart and E. T. B. Worthy, second year's students, Worthy being equal with Stewart in agriculture, and first in practical chemistry, practical botany, book-keeping, farm books, and veterinary science, Stewart being first in theoretical chemistry, theoretical botany entomology, applied mechanics, and land-surveying and levelling. Annual certificates have also been won by the following first year's students: W. C. Davie, first in agriculture, practical chemistry, theoretical chemistry, theoretical botany, entomology, farm books, and veterinary science, B. H. Robertson, first in physiography and mensuration and land-surveying, and equal with W. C. Davie in book-keeping. D. M. Tomlinson, first in practical botany. No change in the teaching staff has occurred during the year, the chemical, biological, mathematical, and veterinary departments being under Messrs. Gray, Marshall, Adams, and Charlton respectively. The subjects of instruction are those set forth in the printed prospectus of last year. A new prospectus is about to be issued, one of the most important changes in it being that of giving a certificate for either scientific work or practical farm-work in accordance with the special aptitude of the student for either. The University of New Zealand now grants certificates and a degree (Bachelor of Science) in agriculture to those students who follow the prescribed course, and pass the necessary examinations.

Farm.—The farm is in good order, as also the live-stock. The yields of wheat, barley, beans, and peas were very fair, ryegrass good, clover-seed poor. Roots were a good crop, but the turnips, swedes, and rape were much injured in their development through the attacks of aphides. Grass was abundant in spring, but at the latter end of summer a scarcity of feed was experienced. The live-stock have, as in previous years, been severely culled, and the best blood for breeding purposes introduced. The stud sheep are a very good lot, and comprise Border Leicester, English Leicester, and Shropshire, all of which were on the farm last year, together with a flock of Romney Marsh, which was recently added. Fewer crossbred sheep are now kept. The stock numbers stand as follows: Cattle, 78, sheep, 1,178, horses, 16, pigs, 118, thus making a sum total of 1,390 head of live-stock carried on a 660-acre farm, of which more than one-third is under cultivation. Some Berkshire pigs are being imported with a view to improving those already on the farm. Some permanent improvements have been effected throughout the year, and a good deal of labour expended in improving the grounds, cutting down and uprooting trees with a view to making a fruit and vegetable garden, and improving the orchard. The hackney stables have been improved, and adequate water-troughs provided for cattle and horses. Experiments, the results of which have been published, have been tried with turnips, barley, and clover-seed, and others are in progress with a view to publication. The annual valuation of live-stock, farm and dairy plant, and seeds took place on Tuesday 11th of June, and was conducted by Messrs. Overton, McMillan, and Boag, and, notwithstanding the low price ruling for stock, the estimated values were very little under those of last year. The Board of Advice have held their usual monthly meetings, have acted as examiners in the practical farm-work, now so important a feature in the course of instruction, and have been of the greatest service in the conduct of the general working of the institution and management of the farm.

J BAYNE, Director

4.—STATEMENT OF ACCOUNTS FOR THE YEAR ENDING 31st DECEMBER, 1894.

STATEMENT OF BALANCES.

Accounts.

CR.	£	s.	d.	£	s.	d.
School of Agriculture, Capital Account	34,255	1	11			
Boys' High School, Capital Account	455	5	0			
Classical School, Capital Account	1 110	2	1			
Superior Education, Capital Account	2 743	1	1			
School of Engineering and Technical Science Account	177	5	6			
School of Engineering, Testing Machinery Account	206	18	0			
Girls' High School, Capital Account	4,804	0	4			
Girls' High School, Maintenance Account	1,072	0	7			
Public Library, Circulating Maintenance Account	97	4	1			
Medical School, Reserves Account	4,400	15	1			
School of Technical Science, Capital Account	19,917	10	0			
Museum, Library, and School of Technical Science, Endowment Fund Account	186	18	11			
Museum, Maintenance Account	78	14	0			
Astronomical Department Account	1,067	16	9			
				70,572	13	4
DR.						
School of Agriculture, Maintenance Account	4,542	18	6			
School of Art, Maintenance Account	253	19	5			
Boys' High School, Maintenance Account	409	6	6			
College, Maintenance Account	74	12	2			
				5,280	16	7
				<u>£65,291</u>	<u>16</u>	<u>9</u>

Bank and Investments.

CR.	£1,047	18	0			
Drawing Account	314	17	0			
Less outstanding cheques				733	1	0
				62,590	19	0
Mortgage of freeholds ..				900	0	0
Purchase of Girls' High School site (deed held)				1,067	16	9
Fixed deposit (Astronomical Department)						
				<u>£65,291</u>	<u>16</u>	<u>9</u>

Liabilities.

New Zealand Trust and Loan Company	28,200	0	0			
Public Library—Scrip of shareholders	113	10	2			
				<u>£28,313</u>	<u>10</u>	<u>2</u>

SYNOPSIS OF BALANCES.

	Dr.			Cr.		
	£	s.	d.	£	s.	d.
School of Agriculture—						
Capital Account				34,255	1	11
General Maintenance Account	4,542	18	6			
School of Art—						
Maintenance Account	253	19	5			
Boys' High School—						
Capital Account				455	5	0
Maintenance Account	409	6	6			
Classical School—						
Capital Account				1	110	2
Superior Education—						
Capital Account				2,743	1	1
College—						
Maintenance Account	74	12	2			
School of Engineering and Technical Science Account				177	5	6
Testing Machinery Account				206	18	0
Girls' High School—						
Capital Account				4,804	0	4
Investment Account	900	0	0			
Maintenance Account				1,072	0	7
Public Library—						
Circulating Maintenance Account				97	4	1
Medical School, Reserves Account				4,400	15	1
School of Technical Science—						
Capital Account				19,917	10	0
Museum, Library, and School of Technical Science, Endowment Fund Account				186	18	11
Museum—						
Maintenance Account				78	14	0
Astronomical Department Account				1,067	16	9
Deposit Account	1,067	16	9			
Mortgage of Freeholds Account				62,590	19	0
Balance at bank	£1,047	18	0			
Outstanding cheques	314	17	0			
			733	1	0	
			£70,572	13	4	£70,572 13 4

Liabilities.

New Zealand Trust and Loan Company—	£	s.	d.	£	s.	d.
School of Agriculture Account	9,200	0	0			
Boys' High School Account	5,000	0	0			
College Account	12,000	0	0			
Museum Account	2,000	0	0			
				28,200	0	0
Public Library—						
Scrip of shareholders				113	10	2
				<u>£28,313</u>	<u>10</u>	<u>2</u>

Boys' High School, Maintenance Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	472	2 2	By Grant to School of Art, for instruction to pupils in drawing	170	0 0
Fees	1,859	0 6	Salaries	3,564	19 4
Rent of reserves (due 1893)	12	5 0	Insurance	27	18 2
Rent of reserves	2,736	4 8	Contribution to Registrar's office expenses	80	0 0
Interest	30	11 2	Examiners' fees	66	10 3
Balance	409	6 6	Leaving exhibition	15	0 0
			Incidental expenses	630	7 6
			Chemicals and apparatus	53	7 7
			Inspecting reserves and advertising	106	15 11
			Interest on loan (N.Z. Trust and Loan Company)	325	0 0
			Expenses of workshop	25	0 0
			Orderly room—Erection and fittings	308	10 2
			Distempering School	8	3 0
			Magic-lantern and slides	38	13 6
			Workshop—Alterations and repairs	44	4 7
			School library grant	5	0 0
			Drainage of Reserve 2007	50	0 0
	<u>£5,519</u>	<u>10 0</u>		<u>£5,519</u>	<u>10 0</u>
			Balance, 1st Jan., 1895	£409	6 6

Classical School, Capital Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	1,110	2 1	By Balance	1,110	2 1
Balance, 1st Jan., 1895	<u>£1,110</u>	<u>2 1</u>			

Superior Education, Capital Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	2,744	10 9	By Share of insurance (Saxton's estate)	0	14 0
Cheque cancelled (South British Insurance Company)	0	6 1	Share of cost of inspection of securities	0	7 3
			Legal expenses	0	14 6
	<u>£2,744</u>	<u>16 10</u>	Balance	2,743	1 1
Balance, 1st Jan., 1895	£2,743	1 1		<u>£2,744</u>	<u>16 10</u>

College Maintenance Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	325	4 5	By Salaries	5,672	6 4
Rent of reserves—			Incidental expenses (College)	529	13 1
Classical school reserves (due 1893)	305	17 5	(Laboratory)	356	3 2
Town sections (due 1893)	66	13 4	Insurance (College)	86	5 2
Classical school reserves	3,933	18 0	(Laboratory)	19	13 9
Superior education reserves.	2,565	0 0	Rates	6	5 8
Rent of town sections	432	8 0	Exhibitions (College)	120	0 0
Rent of College lodge	60	0 0	Contributions to School of Engineering—		
Students' fees	404	3 4	For scholarships	20	0 0
Students' fines (fees)	5	5 0	For maintenance	550	0 0
(Library)	2	9 6	Books for College library	7	7 8
Interest on capital	248	17 11	Inspecting reserves and advertising	82	4 1
current account	21	16 7	Repairs	26	0 11
Sale of calendars	7	18 5	Interest on loan (N.Z. Trust and Loan Company)	780	0 0
Contributions towards salaries of Registrar and staff, and office expenses—			Repairs to College lodge	4	15 0
From Library	20	0 0	Expenses of music lectures	15	3 2
Boys' High School.	80	0 0	Drainage of Reserves 737 and 738 (main drains)	160	10 5
Girls' High School.	70	0 0	Tiles for entrance hall	73	19 8
School of Art	30	0 0	Chairs for College hall	158	2 6
School of Engineering and Technical Science	30	0 0	Cost of laboratory inquiry (part)	37	15 0
Museum	50	0 0	Lecturer on biology (passage-money)	20	0 0
School of Agriculture	100	0 0	Students' fines, handed to Magazine Club	7	14 6
Rent of building (School of Engineering and Technical Science)	193	18 4	Biological Laboratory, incidentals	75	3 5
Sale of door-step	0	6 0	apparatus	232	7 1
Sale of text-book	0	1 0			
Hire of hall chairs (G.H.S. and B.H.S.)	10	0 0			
Interest on promissory note (Gibson Brothers)	4	1 2			
Balance	74	12 2			
	<u>£9,042</u>	<u>10 7</u>		<u>£9,042</u>	<u>10 7</u>
			Balance, 1st Jan., 1895	£74	12 2

College Fees of Professors Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
1894.					
To Students' fees	1 710	9 0	By Professor of Classics	214	4 0
Students' fines	5	5 0	Professor of English Literature	547	1 0
Examination-fees—			Professor of Mathematics	312	7 6
Exempted students	114	19 6	Professor of Chemistry and Physics	201	12 0
Music	13	13 0	Lecturer on Law	50	8 0
			Examination-fees paid to professors and lecturers	58	5 8
			Supervisors' fees and expenses	36	0 4
			Other expenses of examinations	12	15 2
			Expenses of examinations in music (Timaru)	2	4 6
			Balance transferred to College Maintenance	409	8 4
	<u>£1,844</u>	<u>6 6</u>		<u>£1,844</u>	<u>6 6</u>

School of Engineering and Technical Science Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	713	13 5	By Salaries	750	0 0
Grant from Museum, Library, and School of Technical Science Endowment Fund Account	623	18 4	College—Rent of building	193	18 4
Grant from Museum, Library, and School of Technical Science Endowment Fund Account (special grants)	200	0 0	Scholarships	40	0 0
Grant from rents of Superior Education Reserves (College)	550	0 0	Contributions to Registrar's office expenses	30	0 0
Grant from College (for scholarships)	20	0 0	Gas	51	14 3
Students' fees	137	19 6	Incidental expenses	109	3 9
Interest	25	16 11	Steam-engine—Freight, insurance, and erection	920	2 4
Refund of duty on steam-engine, &c.	118	16 0	Duty on steam-engine	118	0 0
	<u>£2,390</u>	<u>4 2</u>	Balance	177	5 6
				<u>£2,390</u>	<u>4 2</u>
Balance, 1st Jan., 1895	£177	5 6			

School of Engineering and Technical Science, Testing-machinery Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	244	17 6	By Testing-machinery	37	0 6
Interest	13	18 10	Fitting up water-gauge	4	0 10
			Cost of cablegrams to England	10	17 0
	<u>£258</u>	<u>16 4</u>	Balance	206	18 0
				<u>£258</u>	<u>16 4</u>
Balance, 1st Jan., 1895	£206	18 0			

Girls' High School, Capital Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	4,805	10 4	By share of insurance (Saxton's estate)	0	14 2
South British Insurance Company—Cheque cancelled	0	6 2	cost of inspecting securities	0	7 4
			Legal expenses	0	14 8
	<u>£4,805</u>	<u>16 6</u>	Balance	4,804	0 4
				<u>£4,805</u>	<u>16 6</u>
Balance, 1st Jan., 1895	£4,804	0 4			

Girls' High School, Investment Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Rent of quarter-acre section (school site)	54	0 0	By Balance, 1st Jan., 1894	900	0 0
Balance	900	0 0	Interest on investment	54	0 0
	<u>£954</u>	<u>0 0</u>		<u>£954</u>	<u>0 0</u>
			Balance, 1st Jan., 1895	900	0 0

Girls' High School, Maintenance Account.

<i>Receipts.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
To Balance, 1st Jan., 1894	873	12 2	By Salaries	1 517	5 8
Fees	1,598	12 6	Contribution to Registrar's office expenses	70	0 0
Rent of reserves (due 1893)	58	3 10	Insurance	14	16 11
Rent of reserves	371	9 2	Rent of section (school site)	54	0 0
Interest on capital	252	3 2	Inspecting reserves	6	0 11
Interest on current account	55	12 2	Examination fees	70	7 0
Interest on investment	54	0 0	Incidental expenses	219	1 11
			Scholarships and exhibitions	240	0 0
	<u>£3,263</u>	<u>13 0</u>	Balance	1,072	0 7
				<u>£3,263</u>	<u>13 0</u>
Balance, 1st Jan., 1895	£1,072	0 7			

Public Library (Circulating) Maintenance Account.

<i>Receipts.</i>	£	s.	d.		£	s.	d.
To Balance, 1st Jan., 1894	100	1	7	By Salaries ..	499	5	0
Contribution from Museum, Library, and School of Technical Science En- dowment Fund	750	0	0	Contribution to Registrar's office ex- penses	20	0	0
Subscriptions	781	2	6	Insurance	66	13	3
Fines ..	14	0	6	Gas	143	4	9
Sale of catalogues	1	4	0	Fuel	23	13	5
Sale of magazines	4	6	4	New books (Circulating Department)	207	9	3
Sale of waste paper	5	12	11	Reference Library (books, binding, &c.)	102	19	4
Book detention fees	6	16	3	Renewal of standard works	34	17	10
Philosophical Institute (rent of room)	5	5	0	Periodicals and English newspapers	65	16	5
Interest	15	0	3	Colonial newspapers	40	11	9
Insurance of cottage (burned down)	275	0	0	Incidental expenses	162	3	0
Sale of <i>débris</i> from fire	16	8	9	Repairs	30	19	5
Government Treasury—Transfer of bal- ance at bank to credit of Provincial Council Library	155	16	0	Legal expenses	1	3	6
City Council refund of building permit	0	3	6	Austrian chairs	5	17	0
				New lamp at entrance	7	9	0
				Sub-Librarian's cottage—			
				Erection of cottage	563	2	7
				Architect's commission, &c.	33	3	6
				Clerk of Works' salary	48	0	0
				New blinds	5	19	6
				Asphalting	5	0	0
				Allowance for house-rent (Sub-Librarian)	21	0	0
				Bonus to fire-brigade	5	5	0
				Balance	97	4	1
	£2,130	17	7		£2,130	17	1
Balance, 1st Jan., 1895	£97	4	1				

Reference Library Account.

<i>Receipts.</i>	£	s.	d.	<i>Expenditure.</i>	£	s.	d.
To Circulating Library Account—Transfer of balance	102	19	4	By Books, journals, &c.	88	17	1
				Binding	12	18	9
				Sundries	1	3	6
	£102	19	4		£102	19	4

Medical School, Reserves Account.

<i>Receipts.</i>		£	s.	d.	<i>Expenditure.</i>		£	s.	d.
To Balance, 1st Jan., 1894		3,946	8	10	By Cost of water-race through reserves		7	10	0
Rent of reserves		221	3	2	Legal expenses		3	5	6
Interest		243	18	7	Balance		4,400	15	1
		<u>£4,411</u>	<u>10</u>	<u>7</u>			<u>£4,411</u>	<u>10</u>	<u>7</u>
Balance 1st Jan., 1895		£4,400	15	1					

School of Technical Science, Capital Account.

<i>Receipts.</i>		£	s.	d.	<i>Expenditure.</i>		£	s.	d.
To Balance, 1st Jan., 1894		19,929	11	8	By Refund for deficient acreage—2a. Or.				
Cheque cancelled (South British Insurance Company)			1	11	32p., in land sold out of Reserve 1359		4	8	3
					Share of Insurance (Saxton's estate)		3	12	5
					" Cost of inspecting securities		1	17	5
					Legal expenses			3	14
					Balance		19	917	10
		<u>£19,931</u>	<u>3</u>	<u>0</u>			<u>£19,931</u>	<u>3</u>	<u>0</u>
Balance, 1st Jan., 1895		£19,917	10	0					

Museum, Library, and School of Technical Science Endowment Fund Account.

<i>Receipts.</i>		<i>Expenditure.</i>	
To Balance, 1st Jan., 1894	£ 156 s. 4 d.	By Contributions—	£ 1,500 s. 0 d.
Rent of reserves	2,680 0 0	Museum	
Interest on capital	1,286 11 9	School of Engineering and Technical Science	823 18 4
		Public Library	750 0 0
		School of Art	800 0 0
		Inspection of reserves	14 19 0
		Legal expenses	3 6 6
		Interest	43 13 6
		Balance	186 18 11
	<u>£4,122 16 3</u>		<u>£4,122 16 3</u>
Balance, 1st Jan., 1895	£186 18 11		

