adopted is that of giving money aid to teachers, building grants, grants for apparatus, &c, scholarships and exhibitions, medals and prizes to pupils. All of these are awarded on the results of rigid examination, conducted by papers sent from London and reported on by examiners, among whom are some of the first scientific men in the country. The aids to teachers are at the rate of £2 per annum for each first-class pupil, and £1 for each second-class pupil; and the teacher, in order to receive aid, if not a University graduate, must have obtained at least a second class in the advanced grade of these examinations. Of the aids given to pupils a number are in the form of exhibitions in aid of attendance on higher science schools, and in the case of the higher Government schools the fees are remitted in favor of students taking these exhibitions. It would be difficult to imagine a system likely to do more good, as all that is wanted is that it should be further extended and that more thorough means should be adopted for training the teachers.

SOUTH KENSINGTON MUSEUM.

The most conspicuous part of the establishment at South Kensington is its museum, embracing a vast collection of objects illustrative of industrial products, art and manufactures, and one of the most popular and useful places of instruction by the eye in London. It is proposed to remove to the extensive buildings at South Kensington the vast Natural History collections of the British Museum, and also the collections of the Geological Survey, so as to promote science study as well as that of art. Art education on an extensive scale is conducted at South Kensington itself, as well as in a multitude of affiliated art schools. More especially, young persons are trained as teachers, and with reference to practical applications to decorative art of every description. As illustrations of these, I was shown large collections of patterns for wall papers, table cloths, pottery, and coloured and engraved glass, prepared by the pupils for competition for prizes offered by manufacturers; while in a gallery of the museum, assistants were busy in arranging a vast collection of drawings and paintings sent in from affiliated schools for competition. In the Art training school I saw hundreds of pupils engaged in all kinds of work from the elements of drawing to studies in painting and modelling from life. In addition to the study in the schools, the students, of whom there are between eight and nine hundred, have access to the Galleries of Art in the Museum, and to an Art Library of 25,000 volumes and a collection of 55,000 engravings and photographs. Last year 107 schools were conducted under the "Department" with 20,000 pupils; and in addition to these, elementary drawing was taught in 1,094 schools to 120,928 children. Though art is distinct from science, I think it proper, when speaking of South Kensington, to refer to its work in art as well as in science. Not only is science the handmaid of art, but art is also the handmaid of science, and both must flourish or decay together. More especially the study of art in its application to the wants of ordinary life, cannot fail to be auxiliary to the advancement of science. It is a matter of profound regret that the Boards of Art organized in this country more than ten years ago, have been permitted to languish, and have not been enabled to establish here institutes on the plan of those of the Department of Science and Art in England.

THE LONDON UNIVERSITY.

University College, London, has no organized science school, but it trains men for the Bachelor of Science examination of the London University. This is a general science examination, implying the training necessary for matriculation, and subsequent studies in Physics, Chemistry, Animal Physiology, Geology, Logic, and Moral Philosophy. Bachelors of Science of two years standing can go up for an examination for the Degree of Doctor of Science. These science degrees of the University of London do not lead directly to practical work, and this is an important defect in the system, but they are, no doubt, very important as stimuli to the general preparatory training required by every man of science. The Bachelor of Science degree as offered by the University of London, has also undoubtedly tended to raise science to its proper status in connection with the higher education, but it is not as yet largely taken. At the graduations in May last, at which I was present, there were only eleven Bachelors in Science and seventy Bachelors in Arts. This arises in part from the want of prestige and antiquity in the degree itself, and in part from its having to compete with the honours in science which may be taken in courses in arts, and with the special science schools.

The Birbeck laboratory of University College accommodates 24 practical students; and I was pleased with the ingenious arrangement of its theatre, by means of which 98 students can be employed simultaneously in making experiments with tests under the direction of Professor Williamson and his assistants. This is only one among many indications which I observed of the tendency to give to examinations and instructions in science a practical character, an evidence that its true nature is being more and more appreciated.

THE ROYAL INSTITUTION.

It would be wrong to leave London without referring to the remarkable and unique establishment known as the Royal Institution, founded in 1799, at the suggestion of Count Rumford, and celebrated throughout the world as the theatre of the labours of Davy, Farady and Tyndall, while in London itself it is known and valued as an agreeable and popular exponent of science by means of its lectures and discourses. The Royal Institution has a good building in Albemarle street, containing its theatre, laboratories, library, and reading-room. Its function is two-fold. First, it sustains as its professors eminent scientific men, and provides them with the means for prosecuting original research; secondly, it provides, by its afternoon and evening lectures, the means of presenting to the more refined and educated classes, information as to the latest results of scientific discovery, from the lips of the actual discoverers themselves. Its lecture-room is always filled with a cultivated and attentive audience, who have the advantage of learning orally and at first hand what others must gather from reading, or from secondary sources.

The Royal Institution thus occupies a middle place between the general public and those Scientific Societies, like the Royal, Geological and Linnean, whose objects are strictly scientific or special, and whose meetings are consequently almost entirely composed of scientific men. At the same time it promotes original research in a manner peculiar to itself, and in the highest degree successful. It undoubtedly exerts a most important influence in keeping those who move in the higher strata of society in London abreast of the science of the day, and thus in procuring moral as well as material support for scientific researches; more especially for those which, not being of direct educational or practical utility, are liable to be neglected even by the more intelligent portion of a community, engrossed in the accumulation of wealth or in the still more laborious pursuit of spending it.

OWEN'S COLLEGE, MANCHESTER.

In the great manufacturing community of Manchester, academical education rears its head in an institution of no mean repute in the matter of science education. Owens College is, like our own McGill, based on the liberality of a wealthy merchant, whose name it bears, supplemented by numerous additional benefactions. Among these I find a sum of £10,000, subscribed by 118 merchants and others, for a chemical laboratory and a library; a sum of £9,472 subscribed by the principal engineers of Manchester and the neighboring towns, for the foundation of a chair of civil and mechanical engineering, and a fund of £200 per annum to augment the endowment of the professorship of chemistry. These noble benefactions remind us of the liberality of some of our Montreal merchants and professional men, and should act as a stimulus to others.

I am indebted to Principal Greenwood and Professor Williamson for enabling me to learn the nature and results of the science teaching at Owens College, which in many essential respects more nearly resembles one of our Canadian colleges than any other institution which I saw in England. The department of general literature and science, or, as we should say, the course in arts, extends over three years, and, like our own, includes a certain amount of modern languages, and physical, natural, and mental science. The department of theoretical and applied science, or science course proper, also extends over three years. The first is identical with the first in arts. The second and third are occupied entirely with science subjects, along with the French or German language. The students in this department are prepared for the bachelor of science examination at London. This course is said to be suited to prepare "for the higher departments of manufacturing art, and for pursuits and professions purely scientific." It is also said to be "adapted for such as are hereafter to be engaged in commercial pursuits"—a remarkable testimony to the ideas of education on the part of business men at Manchester, who in this respect come up more nearly than any others in England and her colonies, to the standard of the New England cities. The Principal informed me that there were last session 100 students taking this science course. The third department in Owens College is that of civil and mechanical engineering, in which students are prepared for the examinations in engineering in the Indian Public Works Department, and also for entering on the higher branches of the engineering profession. The course extends over three years. It had only twenty students last year.

Another and most interesting feature of Owens College, suited to its position in a great manufacturing town, is the provision made for evening classes. These include the subjects of the general course, and also a pharmaceutical course intended to prepare chemists and druggists for the examinations under the Pharmacy Act. Most of the students in these classes are what we would call partial students; but some study for the Degree of B. A. of London University. The intention of the college is to accommodate those whose business engagements prevent them from attending lectures in the day time; and the number of students last year was no less than 400. This is a remarkable indication of the avidity for learning on the part of the young business men of Manchester, who enter on this somewhat severe course of study as an employment for their evenings, and after the toils of the day. It is further to be considered that many of these young men have to walk or drive considerable distances in order to attend these classes; but in all the cities of England distance is much less regarded than it is in this country. Prof. Roscoe delivers a separate course of lectures on chemistry to women, which, I was informed, had been successful, though I did not note