and Mr. Quirof Harlan, physicist, from the United States Coast and Geodetic Survey. Norwegians experienced in Arctic work make up the remainder of the party of ten. Mr. Wellman proposes to reach the Pole by a sledging expedition over the pack ice. At Archangel 75 sledge dogs, procured in Siberia, will be taken on board. At Cape Flora, on the southern coast of Franz Josef Land, two or three men will be left, while others will search for Andrée before the steamer returns in August. Half-a-dozen of the party, with small canvas boats, sledges and dogs, are to push on at once for the northern parts of the archipelago, passing successively the point reached by Mr. Jackson, the spot where Dr. Nansen and Lieutenant Johansen wintered, and Cape Fligely, lat. 82°, reached by Payer in 1874. Somewhere beyond 82° they intend to build a hut to winter in, shooting polar bear, seal and walrus for food. Next spring they propose to set out on a sledge journey toward the Pole. If the conditions are unfavorable they will wait till the second spring. They will have about 120 days in which to reach the Pole, if possible, and return to the land, requiring an average travel of nine to ten statute miles per day. They take with them a rubber pneumatic boat, which inflates with a pump like a bicycle tire, and also a folding canvas boat, built on Mr. Wellman's designs, also sledges of metal, water-tight, so built that they may turn over and over in rough ice or float in the water without injury to their contents. Each dog is to draw one sledge, practically without assistance or driving by the men.

At a meeting, on April 26th, of the select committee of the British House of Commons, on the Department of Science and Art, Sir J. Norman Lockyer was the principal witness examined. He, as reported in the London *Times*, spoke of the insufficiency of the present collection of scientific objects, having regard to the growing necessity of, and demand for, scientific teaching. The Royal College of Science, he pointed out, only taught pure science. The various applications of science to industry were not represented in their teaching at all, and therefore it was not part of their function to make recommendations with regard to this large area of possible museum representation. He was perfectly aware that there was scarcely any branch of applied science which was not represented, more or less, in the present collection, but what he said was that the schemes of representation were very dissimilar and must necessarily remain so. He desired a considerable extension of the science collection. To him it was unthinkable to separate the schools from the museums. It was a much better education for the student of science to be turned into a laboratory, where he could use the apparatus and see other people use it, than to attend lectures. He had taken very great interest in this matter, and some amount of trouble, because it seemed to him that the truth of what Professor Huxley used to preach was coming home to them more and more every day. That was that they were in front of an industrial war, the result of which would be far more serious to them than a mere national war. In this industrial war it was no longer a question of battleships and cruisers. It was a question of schools. The schools were Germany's battleships; they in England had only cruisers. So far as the British fleet was concerned, it was supposed to be twice as strong as the fleets of any two Powers. That might be so, but educationally they were scarcely on a level with Switzerland. They could not hope to fight this struggle for existence unless they had battleships, by which he meant thoroughly developed scholastic institutions.

UNIVERSITY AND EDUCATIONAL NEWS.

REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR 1896-97.

The first volume of the report of the Commissioner of Education for the year 1896–97 has been published. The Commissioner, Dr. W. T. Harris, in his summary, states that 16,255,093 pupils were enrolled in the schools and colleges, being an increase of 257,896 over the preceding year. This increase was entirely in public institutions, there having been a decrease in the total number attending private schools. The Commissioner attributes this decrease to the continuance of what is called 'hard times,' but it seems rather to be due to the improvement of public institutions. Twenty years ago there

were three times as many students in private high schools as in public high schools, whereas now there are more than three times as many students in the public high schools as in the private high schools.

The number of students pursuing liberal studies in colleges and universities was 97,122, a decrease of 255 from the number reported in the preceding year. The number of graduate students is, however, constantly increasing, being in 1896–7 4,919, of whom 1,413 were women. There were 8,173 students of theology, 10,449 students of law and 24,377 students of medicine.

Dr. Harris is especially interested in the introduction of reindeer into Alaska, and describes in some detail what has been accomplished in this direction. He thinks that the reindeer are useful in training the natives as herders and teamsters and in educating them in habits of thrift, which seems considerably to enlarge the scope of the Commission of Education.

This first volume contains 22 special papers of considerable though of unequal value. One of the longest of the articles (158 pp.), entitled 'Some Recent Contributions of Biology, Sociology and Metallurgy to the Curriculum of Colleges endowed by the Federal Government for the Benefit of the Agricultural and Mechanic Arts,' and written by Mr. Wellford Addis, contains rather a curious collection of miscellaneous information. One of the more interesting articles is on college admission requirements, showing the great and needless diversity in our 475 institutions. The requirements vary from those of Harvard and Johns Hopkins down to the college that happens to head the list, which asks for entrance to a course for the A.B. : 'Lessons in English, elementary history of the United States, elementary arithmetic, geography and drawing.' In no department are the entrance requirements so generally unsatisfactory as in science. Could not the A. A. A. S. and the N. E. A. appoint a joint committee that would propose a remedy?

GENERAL.

A NEW Museum of Archæology for the University of Pennsylvania is being erected at a cost of about $500,000. It was begun in January of the present year and will be completed early next year.

GEORGE A. FOWLER, of Kansas City, has given $21,000 to rebuild the agricultural buildings of the University of Kansas, recently destroyed by fire.

THE Rev. Robert Herbert Story, D.D., professor of church history in the University of Glasgow, has been appointed Principal of the University, in room of Principal Caird, resigned.

REV. JOHN WHITNEY has been installed as Rector of the Catholic University of Georgetown, D. C.

WILLIAM DUANE, PH. D. (Berlin), has been appointed professor of physics in the University of Colorado, succeeding Professor W. J. Waggener, who has resigned owing to failing health.

CORNELL UNIVERSITY has recently been called upon to contribute an unusual number of the members of her instructing staff to other institutions. This has been a particularly trying year in her technical and especially her engineering departments. The Sibley College of Mechanical Engineering, for example, loses the senior assistant in its electrical engineering department, Mr. Macomber, who goes to the Armour Institute, of Chicago, as professor of that branch; the senior assistant in the department of machine design, Mr. H. D. Williams, retires to promote a line of his own inventions of promise and importance; the next in seniority in the same department, Mr. A. T. Brügel, goes to the Pratt Institute, to take charge of similar work there; two or three others, instructors, retire to find advantageous appointments elsewhere, while, in the department of experimental engineering, also, the instructor in the study of the 'materials of engineering,' Mr. Houghton, resigns to accept the professorship of mechanical engineering in the Arkansas State University. A number of these positions are, at last accounts, unfilled, and it is expected that special care will be taken to select men of practical experience, as well as of talent and education, to carry on work which is, in all cases, greatly specialized. This training of

young men to special work, usually preparatory to their early promotion into professorships elsewhere, is found, it is reported, to be somewhat trying to the heads of departments, as compelling too frequent changes; although it is most creditable to the college and very helpful to the growing technical schools and college departments into which this output passes.

THE Association of Collegiate Alumnæ has awarded its European Fellowship to Miss Caroline Stewart (A.B. Kansas University '92, A.M. Michigan '95). Miss Stewart held a Scholarship in Germanic languages at Bryn Mawr, in '95–6, and a Fellowship at the same College in '97. The American Fellowship has been awarded by the Association to Miss Caroline E. Furness, Vassar '91, who has been assistant the past three years in the Observatory at Vassar.

THE Women's Education Association of Boston, which awards its Fellowships through a joint committee composed of members of its own organization and the Fellowship Committee of the Association of Collegiate Alumnæ, has this year awarded two European Fellowships of $500 each. The successful candidates are Miss Louise Phelps Kellogg, Wisconsin '97, student in American history; and Miss Katherine B. Davis, Vassar '92. Miss Davis was in charge of the Model Workingmen's Home at the World's Fair and was for a time head-worker at the College Settlement in Philadelphia. The past year she has held a Fellowship in Political Economy at Chicago University, and declined a reappointment to accept this Foreign Fellowship.

A PUBLIC meeting was held in Birmingham on July 1st, to consider the proposal of establishing a university in Birmingham. The principal address was made by Mr. Chamberlain, M. P., who strongly advocated the plan, and the following resolution was carried: "That, in the opinion of this meeting, it is essential that, in the interests of the city and the Midland districts generally, a university should forthwith be established in Birmingham." The resolution was carried. Donations were announced to the amount of £95,244. Included in this was £20,000 from the Birmingham, Brewers' Fund, an anonymous donation of £20,000, £10,000 from Mr. G. H. Kendrick, five donations of £5,000 each, two of £2,000 each, and 21 of £1,000 each. Mr. Chamberlain was amongst those who gave £1,000.

SIR WILLIAM FORWOOD, Chairman of the Library, Museum, Art and Technical Instruction Committee of the Liverpool City Council, laid, on July 1st, says the London *Times*, the foundation-stone of an addition to the fine range of buildings (the Brown Library and Museum, the Picton Reading-room and the Walker Art Gallery) on the north side of William Brown-street in that city. The new structure, which is estimated to cost the corporation close upon £100,000, will provide additional needed accommodation for the Museum (which will then be one of the finest of its kind in the kingdom), besides the Central Technical School. The three lower floors, reached from a separate entrance in Byrom-street, will be devoted to the purposes of the Liverpool School of Science, Technology and Art. In the basement will be rooms for practical instruction in electricity, engineering and various other technical subjects. Above this will be a lecture-hall, capable of accommodating nearly 400 students, besides class rooms for various subjects, and the necessary administrative offices. On the floor above this again will be a number of other class-rooms, adapted for the instruction in mathematics, building construction, etc.; and in a cross gallery on a higher level (isolated from the other portion of the School) will be a properly equipped chemical laboratory and lecture-room.

THERE are this summer 5,606 students matriculated at the University of Berlin, which is more than 1,200 in excess of the registration last summer. There are in addition 678 auditors, of whom 193 are women.

SCIENTIFIC LITERATURE.

L'Electro-Chimie: Prodution électrolytique des composés chimiques. Par AD. MINET.

This little volume comprises two sections. Forty-two pages are devoted to the description of the electrolysis of sodium chloride. Every point of interest to manufacturing chemists is carefully considered and explained in detail.