only to establish bureaus of investigation, but some to save as well.

A progressive manufacturer does not hesitate long in substituting more efficient machinery. He also knows that his people are more efficient and happier in good sanitary surroundings. So, even if the leaks are stopped and the cost of running mounts up, the community is the better able to bear the burden and does it cheerfully. The average American doesn't mind paying a suitable price for a satisfactory article; in fact, of late he has become somewhat accustomed to paying a little more than he should.

The complications arising from the growth of cities call not only for "the employment of well-trained, tactful, honest, energetic and fearless health officials," but also lays a responsibility upon all forms of educational activity to bring about a "better appreciation by the people at large, of what is conducive and what a menace to public health," and individual safety.

In regard to health officials, I can not refrain from expressing an opinion bearing upon the organization of a health department. In the first place the head of the health department should be an expert sanitarian and not merely a doctor of medicine, whose training in sanitation has been incidental. He should be a specialist in sanitation with the background of a medical doctor. Furthermore, the numerous details, especially financial, should not be thrown upon the head any more than the captain of a warship should look after the details of the ship's larder. The chief needs every particle of his well-trained brain and energy to deal with the great problems of the city's health. He should be provided with a financial coadjutor—a man of absolute rectitude, and as well trained as himself, but along another line -a man who will see that the purchasing power of the city's money is equal to that of a private corporation. The terms of office of these directors, technical and financial, should be limited to the period of normal human efficiency, decent pension provisions being made for them when that period shall have ended. They would thus be unhampered by any political, religious or social associations, in the conduct of the department. I recognize that such a proposition is somewhat radical-in fact in direct opposition to the opinion of some and sounds a bit utopian, but I am glad to say that my confidence in my fellow man is such that I am willing to give such large powers to him. Our democratic government breeds men worthy of such confidence; if it does not, then it is a failure, and we are not willing to acknowledge or to accept that verdict.

CHARLES BASKERVILLE COLLEGE OF THE CITY OF NEW YORK

SCIENTIFIC NOTES AND NEWS

AT the Minneapolis meeting of the American Association for the Advancement of Science, Dr. Charles E. Bessey, professor of botany and dean at the University of Nebraska, was elected president for the meeting to be held at Washington, beginning on December 27, 1911. It is planned to hold the meeting of 1912 at Cleveland. The meeting of the association and of the affiliated societies at Minneapolis was in every way successful. The registration of members of the association was 663, which represents an attendance of scientific men about twice as large. Owing to the distant place of meeting, it is necessary to wait until next week for the publication of the report of the general secretary and the addresses of the vice-presidents.

Professor Alexander Smith, University of Chicago, was elected president of the American Chemical Society at the Minneapolis meeting.

At the meeting at Ithaca the following were elected as officers for 1911 of the American

Society of Naturalists: President, Professor H. S. Jennings, Johns Hopkins University; Vice-president, Dr. Geo. H. Shull, Carnegie Institution; Treasurer, Professor E. M. East, Bussey Institute; Secretary, Professor Chas. R. Stockard, Cornell Medical School; additional members of the Executive Committee, Professor W. L. Tower, University of Chicago, and Dr. B. M. Davis, Cambridge, Mass.

Professor W. G. Farlow, of Harvard University, was elected president of the Botanical Society of America at the meeting held last week at Minneapolis.

Dr. W. H. Dall, of the U. S. National Museum, was elected president of the American Paleontological Society at its recent Pittsburgh meeting.

THE American Psychological Association at the Minneapolis meeting elected Professor C. E. Seashore, State University of Iowa, as president, and Professor Walter V. Bingham, Dartmouth College, as secretary.

Professor Frederick J. E. Woodbridge, professor of philosophy at Columbia University, has been elected president of the American Philosophical Association and Professor Walter T. Marvin, of Rutgers College, vice-president.

M. Armand Gautier has been elected president of the Paris Academy of Sciences for 1911. M. Lippmann becomes vice-president.

Dr. Lewis Boss, director of the Dudley Observatory at Albany, and Dr. Frederick Küstner, professor of astronomy at Bonn, have been elected corresponding members of the Berlin Academy of Sciences.

Dr. RICHARD HERTWIG, professor of zoology in the University of Munich, has been made knight of the Maximilian order for art and science.

Professor J. H. Poynting, F.R.S., has been elected a foreign fellow in the Reale Accademia dei Lincei.

Mr. Sydney Chapman, M.Sc., of the University of Manchester, has been appointed a chief assistant in the Royal Observatory, Greenwich.

M. Ernest Fourneau has been elected director of a newly-established laboratory for researches in the chemistry of therapeutics in the Pasteur Institute, Paris.

Dr. Karl Neumann, professor of mathematics in the University of Leipzig, has retired.

Dr. John L. Todd, associate professor of parasitology at McGill University, will join the expedition sent by the Liverpool School of Medicine to Gambia, Africa, for the study of tropical diseases.

The movement set on foot by the Liverpool School of Tropical Medicine in commemoration of the work of Dr. J. E. Dutton, who lost his life on the Congo through contracting spirillum fever while on the twelfth research expedition of the school in 1905, has now been completed. The school has been able to offer Liverpool University £10,000 for the establishment of a chair in tropical entomology. At a meeting of the council of the university it was resolved gratefully to accept the offer.

At the New York Academy of Medicine meeting, December 15, the president, Dr. John A. Wyeth, gave a brief memorial address on the late Dr. Robert Koch, honorary fellow of the academy. Dr. S. Adolphus Knopf, who was a student under Dr. Koch, presented a portrait of Dr. Koch.

Dr. Willis G. MacDonald, professor of surgery in Albany Medical College, died on December 30 at the age of forty-seven years.

Dr. Franz König, formerly professor of surgery in Göttingen and Berlin and later head of the surgical Hospital of the Charité, Berlin, known for his work in the treatment of articular tuberculosis, died on December 12, at the age of seventy-eight years.

The death is announced of Dr. A. Kraemer, formerly professor of agriculture in the Zurich Polytechnic Institute, at the age of seventy-eight years.

THE Elizabeth Thompson Science Fund was established by Mrs. Elizabeth Thompson, of Stamford, Conn., "for the advancement and prosecution of scientific research in its broadest sense." The income from this

fund is now available, and the trustees desire to receive applications for appropriations in aid of scientific work. The trustees are disinclined, for the present, to make any grant to meet ordinary expenses of living or to purchase instruments, such as are found commonly in laboratories. Decided preference will be given to applications for small amounts, and grants exceeding \$300 will be made only under very exceptional circumstances. Applications for assistance from this fund, in order to receive consideration, must be accompanied by full information, especially in regard to the following points: (1) Precise amount required. Applicants are reminded that one dollar is approximately equivalent to four English shillings, four German Marks, five French francs, or five Italian lire. Exact nature of the investigation proposed. (3) Conditions under which the research is to be prosecuted. (4) Manner in which the appropriation asked for is to be expended. All applications should reach, before February 1, 1911, the secretary of the board of trustees, Dr. C. S. Minot, Harvard Medical School, Boston, Mass., U. S. A.

It is stated in *Nature* that a prize of 100,000 francs is to be awarded to the inventor of a practical apparatus which will make it possible to save the crews of wrecked submarines, enabling them to regain the surface uninjured. The French minister of marine is able to offer the prize, as he has received an anonymous gift from a French lady for the purpose.

Mr. Thomas Lupton, of Great Britain, solicitor to the Royal Institution, who died on October 30 last, aged 90 years, left £10,000 for the general purposes of that institution.

THE department of zoology and entomology of the Ohio State University has recently received the gift of a fine collection of Lepidoptera from Mrs. Catherine Tallant, of Richmond, Indiana. The collection was made by Mr. W. N. Tallant and contains mainly species occurring in central Ohio, especially at Columbus, but has also a number of species from different parts of the United States, and

also some fine samples of species occurring in South America, Japan, China, India, Ceylon and Africa. The collection contains about 10,000 specimens in most excellent condition, very beautifully mounted, and many of the species contain very full series, showing variations, etc., which will make them of special value for scientific study. They are, for the most part, carefully identified and will be kept under the name of the "Tallant Collection." Taken with the other collections in Lepidoptera, the collection of Odonata left by Professor Kellicott, and those in various groups which have been accumulated by the efforts of the members of the department, the university is now provided with excellent series of insects, including representatives in all the different orders. The total number of specimens in all orders probably approaches close to 100,000.

THE expedition sent by the Carnegie Institution of Washington for geologic exploration in China in 1903-04, in charge of Dr. Bailey Willis, secured a number of large negatives of Chinese scenes representing the scenery; the geological conditions, particularly of loess landscapes, and also of Chinese buildings, monuments and people. The route of the expedition through the provinces of Chili, Shansi and Shensi, led through the loess district and some remote mountain regions of great interest and scenic beauty. This collection of photographs has been placed on file with the Smithsonian Institution and copies may be had for educational purposes by application to the secretary of the institution and payment of costs.

Trinity College, Hartford, Conn., has retained the Ralph B. Carter Company, of 50 Church Street, New York, to install a circulation sea-water system in the five marine tanks in Boardman Hall, similar to the one which they placed in the aquaria house at Princeton. Hard rubber piping and valves are used to convey the sea-water from cedarwood tanks, and return the water to the reservoir, also of cedar, by way of a sand filter. The water will pass through a bronze motor-driven compressor

into an air reservoir where aeration will take place and air and water together will be pumped through the pipes to the aquaria, thus differing from the Princeton system where a column of air is forced against the water in the pipes and the water does not enter the pump. The tanks may be converted immediately into fresh-water tanks, whenever this is desired.

THE subjects and dates of the lectures to be delivered before Easter at the Friday evening meetings of the Royal Institution of Great Britain are as follows: January 20, Sir J. Dewar, "Chemical Change at Low Temperatures"; January 27, Professor W. H. Bragg, "Radioactivity as a Kinetic Theory of a Fourth State of Matter"; February 3, Mr. A. E. Shipley, "Grouse Disease"; February 10, Mr. S. Colvin, "Stevenson"; February 17, Professor H. E. Armstrong, "Digestive Activity"; February 24, Professor Jean Perrin, "Mouvement Brownien et Realité Moleculaire" (in French); March 3, Professor Karl Pearson, "The Inadequacy of Causation in Modern Science"; March 17, Mr. J. H. Balfour-Browne, K.C., "Water Supply"; March 24, Sir D. Gill, "The Sidereal Universe"; March 31, Professor H. S. Hele-Shaw, "Traveling at High Speeds on the Surface of the Earth and Above It"; April 7, Sir J. J. Thomson, "A New Method of Chemical Analysis." A course of Christmas lectures on "Sound: Musical and Non-musical" will be given by Professor Silvanus P. Thompson in the afternoons of December 29 and 31 and January 3, 5, 7 and 10.

UNIVERSITY AND EDUCATIONAL NEWS

Commemorative exercises in celebration of the completion of the first twenty-five years of the work of the Carnegie Laboratory of New York University, and of the opening of the Carnegie laboratory extension, will be held on the afternoon of January 10. Addresses will be made by Mr. Andrew Carnegie, Dr. William H. Welch, Dr. Henry S. Pritchett, Dr. Hermann M. Biggs and Mr. Jerome D. Greene.

THE fifth congress of the American School Hygiene Association will be held at the Academy of Medicine in New York City on the second, third and fourth of February. A tentative program includes papers by Lyman A. Best, William H. Allen, Dr. S. W. Newmayer, Dr. Myles Standish, Dr. Woods Hutchinson, Dr. Thomas F. Harrington, Dr. W. S. Cornell, W. E. Watt, Dr. Arthur T. Cabot, Dr. Luther H. Gulick, Leonard P. Ayres, Dr. Helen MacMurchy, Professor William H. Burnham and Dr. John J. Croner.

During the thanksgiving recess at the University of Illinois, a party of electrical engineering students and of architectural students took a trip of inspection to various points in the vicinity which are of especial interest to engineers. The electrical students visited the Quarry Street power station, the steel works at Gary and the works of the Allis-Chalmers Company at Milwaukee. The architectural students visited various buildings in Chicago and inspected the plant of the Northwestern Terra Cotta and Tile Company.

Professor C. S. Sherrington, F.R.S., of Liverpool, and Dr. William Bulloch, director of the Bacteriological Laboratory of the London Hospital Medical School, were appointed members of the advisory board of the Beit Memorial Fellowships for Medical Research. The next election of fellows will be held in December, 1911. The last date for receiving applications from the colonies and abroad is October 1, 1911, from Great Britain and Ireland November 1, 1911. Communications should be addressed to the Hon. Secretary, Beit Memorial Fellowships for Medical Research, 35, Clarges Street, London, W.

In behalf of a donor who withholds his name, Mr. George L. Rives, chairman of the trustees of Columbia University, and Mr. Robert W. DeForest, president of the board of managers of the Presbyterian Hospital, announce that \$1,300,000 has been pledged for the perfection of an affiliation between the hospital and the College of Physicians and Surgeons of the University. The gift comes through Mr. Edward S. Harkness, of New York and Cleveland, who gives \$300,000 for a surgical pavilion and a laboratory for research work. Several conditions are named, the two