

eyesight becomes defective later, spectacles are supplied by the company. It was suggested that engineers and firemen who required glasses should not be employed owing to the difficulty of keeping them clean.

PROFESSOR HALE, of the University of Chicago, and Professor Keeler, of the Allegheny Observatory, are now in Boston engaged in testing the lenses which Mr. Alvan Clark has now nearly completed for the Yerkes Telescope and which he will perfect under their direction.

HERR LUDWIG DÜRR, a German civil engineer, has recently exhibited before the military authorities in London a lamp invented and patented by him. The light is originated by automatic evaporation and overheating of the vapors of ordinary petroleum, and is said to yield a light ranging from 3,500 to 14,000 candle power. With it small print could be easily read at a distance of 120 yards. It is stated that the Dürr light has already been extensively adopted by the Russian and German governments.

THE Paris Academy of Sciences listened to a curious address by M. Émile Blanchard on October 7th. M. Blanchard stated that Lord Salisbury's presidential address before the Oxford meeting of the British Association confirmed the views he had always held regarding the permanence of species. He said that he had been unable to alter the hereditary color of the wings of butterflies, though he had kept them under colored lights of all the shades of the spectrum, and that he himself had often offered in vain to bring before the Academy the results of any investigator who had produced a new species in the animal kingdom!

PROFESSOR MACH, of Vienna, and Professor Wislicenus, of Leipzig, have been elected members of the Kaiserl. Leop.-Carol. Akademie deutscher Naturforscher.

DIE Accademia dei Lincei, of Rome, has

elected H. Wild as foreign member and Ernesto Cäsaro, the mathematician, and Annibale Ricco, the astronomer, as corresponding members.

MR. HOLBROOK CUSHMAN, instructor in physics in Columbia College, died on the evening of October 25th from heart disease, at the age of 38.

DR THOMAS KEITH, a distinguished London physician, known for his original investigations in ovariectomy and in fibroid growths, died on October 9th in his sixty-ninth year.

WE learn from the *Naturwissenschaftliche Rundschau* that Professor Dimitri Brändza, director of the Botanical Gardens in Bukarest, died at Stanicul, Moldau, on August 15th. Dr. Riva, the botanist and African explorer, died in Rome on August 24th. On September 4th Professor Dr. Hellriegel, director of the agricultural experiment station, died at Bernberg, at the age of 64 years. On October 1st died Dr. Gustav Wilhelm, professor of agriculture in the technical high school of Gratz, at the age of 61 years, and Dr. Ernst von Rebeur-Paschwitz, astronomer and Privatdocent at Halle, at the age of 34 years.

UNIVERSITY AND EDUCATIONAL NEWS.

ANNUAL REPORT OF PRESIDENT LOW OF COLUMBIA COLLEGE.

PRESIDENT Low's report was presented to the Trustees of the College on October 7th, and will shortly be published. From it we take the following facts concerning the progress of the University.

Undoubtedly the most important events in the history of the University are those relating to its removal to the new site. Of these events President Low's own gift of a million dollars for the Library Building as a memorial of his father, though only incidentally mentioned in the report, is the most noteworthy. A building for the Depart-

ments of Natural Science has been given by Mr. Schermerhorn, but at least six other buildings are needed. Much work has already been done on the new grounds, and the autumn of 1897 has been fixed as the time when the University shall remove to its permanent home.

The College of Physicians and Surgeons (School of Medicine of the University) will remain at its present site, and the buildings have been enlarged at a cost of \$600,000.

During the year 24,839 bound volumes have been added to the Library, making the total number of books over 200,000. More than \$25,000 was contributed during the year for the purchase of books in addition to special gifts.

Thirty University scholarships of the value of \$150 each have been established for graduate students. In connection with President Low's gift and at his request eight University scholarships and a University fellowship were established. Twenty scholarships are also to be maintained by the Trustees in Barnard College, and the Trustees at their own motion established a professorship to be known as the 'Seth Low Professorship of American History.'

The increase in the number of students in the University continues. The total number of students was

| | |
|--------------|------|
| 1891-92..... | 1573 |
| 1892-93..... | 1641 |
| 1893-94..... | 1805 |
| 1894-95..... | 1943 |

Of these 649 already held degrees representing 136 American and 26 foreign institutions. There were in the School of Philosophy 95 graduate students, in the School of Pure Science 34 and in the School of Political Science 94, and in addition students in the Senior Class of the School of Arts attend these schools.

The total number of instructors was 265, of whom 53 were professors, 8 emeritus professors and 15 adjunct professors. The

most important addition to the School of Pure Science was the appointment as professor of mathematics, under an arrangement with Barnard College, of Professor Frank D. Cole, from the University of Michigan.

The report lays especial stress on the importance of a liberal training as a foundation for professional education. In discussing this question President Low writes:

"Men cannot afford to postpone their specializing in study until so late in life as twenty-two or twenty-three years of age. In England and Germany they begin to specialize at nineteen and twenty, and they ought to do so here. In the newer country it is harder, not easier, to postpone the actual duties of life. It is in this light that I interpret the recent proposition from Harvard to give the Bachelor of Arts degree in three years, and it is certainly in this light that our own action is to be understood of permitting our college Seniors to study under any of the university faculties. Our Freshman Class at Columbia averages at entrance a little above seventeen years of age. * * * But now that the university has appeared in this country as a place for specialization ideally to be founded on a previous liberal training, it is clear that the liberal training must either be omitted altogether or be confined to those years to which it properly belongs. These years I conceive to be broadly from sixteen to twenty."

President Low is justified in reporting "for the University a year of vigorous, inspiring life, whether regard be had to the current activities of the year, or to the progress made in laying the foundations of the University upon the new site."

GENERAL.

THERE have been two additions of importance to the Stanford Faculty for this year. Dr. H. H. Powers, of the department of economics in Smith College, appointed to the chair of economics and social science; Prof. F. J. A. Davidson, of Toronto University, to the assistant professorship of Romanic languages; the latter appointment being to fill the vacancy made by the resignation of Prof. W. S. Symington, Jr., who takes a professorship in Amherst. Dr. Henry C. Meyers, instructor in chemistry,

resigned to take a professorship in chemistry in Washington State University, to which institution Dr. M. W. Harrington, late of the Weather Bureau, has been called as President, and Mr. Harry Landes, A. M., of Harvard University, to the professorship of Geology.

It has been incorrectly reported in several journals that the University of California will be moved from Berkeley to San Francisco. Mayor Sutro has given 13 acres of ground in San Francisco and the State Legislature has appropriated \$250,000 for the erection of buildings, but these are for the professional schools of law, medicine, dentistry, pharmacy and art, which have always been located in San Francisco.

MRS. CORNELIA A. ATWILL has given \$6,000 to Columbia College for the foundation of two scholarships, to be known as the Stuart Scholarships in the school of arts, in memory of her grandsons, S. B. Stuart, Class of 1880, E. T. Stuart, Class of 1881, both of whom have since died. Mrs. Atwill reserves the privilege of nominating the scholars if so disposed, during her lifetime.

PRESIDENT PETER McVICAR has resigned the Presidency of Washburn College, Topeka, Kans., which position he has held since 1871.

THE British Treasury has offered to include in next year's estimates a grant of £20,000 to the University College of South Wales. Cardiff and the Drapers company have offered to subscribe £10,000, provided that similar amounts are collected locally.

AMONG recent foreign appointments we notice that Dr. Dogiel, professor of anatomy in the University of Tomsk, has been called to the University of St. Petersburg, and Dr. J. P. Kuenen has been called to the new Harris chair of physics in University College, Dundee. Dr. F. Marés has been promoted to the professorship of physiology at the Bohemian University of Prague and Dr.

Schuchardt has been appointed to a newly established chair of psychiatry at Rostock.

THE Williams Science Hall given to the University of Vermont by Dr. E. H. Williams, of Philadelphia, at a cost of \$13,000 is now nearing completion. It contains laboratories and lecture rooms for the departments of chemistry, physics, biology and electrical engineering. The present Freshman Class, 78 in number, is the largest in the history of the University.

FROM the Oxford University Gazette of October 11th giving the courses for the Michémas term, it appears that in mathematics, astronomy and mechanics lectures are given occupying together twelve hours per week; in physics four hours per week; in chemistry eleven hours; in comparative anatomy two hours or more; in physiology five hours; in botany six hours; in geology six hours; in rural economy two hours; in zoology two hours, and in anthropology one hour. Laboratory work is offered in connection with most of these courses, but the opportunities for scientific study at Oxford do not seem to be so favorable as at the leading German and American universities.

CORRESPONDENCE.

THE PROBLEM OF SOLAR MAGNETISM.

THE work of Professor Bigelow (*SCIENCE*, p. 509, October 18, 1895) upon this subject has reached such dimensions as to command attention; at the same time the conclusions require the abandonment of so many ideas which experimental physicists have considered as representing experimental facts that I venture to call attention to some of the points which will render the new theory difficult of acceptance, by some at least. If Professor Bigelow has foreseen and quantitatively explained away these difficulties we ought to have the explanations.

If meteorology has contented itself (p. 510) with only a consideration of combinations of 'earth's gravity, earth's rotation and equa-