

**OFFICIAL PROGRAM**

(Continued from page 4) will be made at Nahant. The photograph will be 10 inches wide and about 60 inches long. By special arrangement copies will be furnished to the alumni at the remarkably low price of \$2 each. A flash light photograph, 16 inches by 24 inches, will be taken at the banquet under the direction of the Notman Photographic Company, 3 Park Street, Boston. Proofs will be shown before the close of the evening, and copies may be ordered. Price \$2.50.

**HAROLD PENDER**

**Experienced Electrical Engineer Comes to Institute**

Harold Pender, an able teacher, experienced in original research work, and with years of successful, practical electrical engineering behind him, comes to the Institute next fall to take the professorship left vacant by Prof. Clifford of Harvard.

Harold Pender was born in Tarboro, North Carolina, 1879. He received his primary education in the public schools of Baltimore, Maryland, and at McDonough School, near Baltimore, received the degree of B. A. at Johns Hopkins University in 1898, and Ph. D. at Johns Hopkins University in 1901; his special subjects were physics, electrical engineering, and chemistry. He held a Hopkins Scholarship for the years 1896-97 and 1897-98, and a University Scholarship for the year 1898-99; he graduated second in his class, and was elected a member of the Phi Beta Kappa Society in 1898.

During the last two years of his graduation work at Johns Hopkins he assisted in the laboratory instruction of undergraduate students in the department of physics; in the summer of 1902 he gave a course in physics in the summer school at Syracuse University, and was for a time instructor in physics at Syracuse University.

In December, 1902, he was invited by M. H. Poincare of La Sorbonne, Paris, to carry out in the laboratories of the University at their expense certain research work on the magnetic effect of moving charges of electricity, in which research he had been engaged in this country for the preceding two years. He therefore resigned the instructorship at Syracuse University in January, 1903, and spent the next four months



Prof. Harold Pender

in Paris, where he brought the research in question to a successful conclusion. The necessary funds for this work were supplied by the Carnegie Institution of Washington, D. C.

On his return to this country in 1903 he entered the shops of the Westinghouse Electric and Manufacturing Company at Pittsburg, Pa., and in the fall of 1903 was given a position in the engineering department of that company. While with the Westinghouse Company he made a special study of the heat radiation from large transformers and developed an accurate method of predetermining the size of cooling coils used in the water-cooled type; he also had charge of the testing of the sheet steel used in the construction of transformers and other apparatus.

In the spring of 1904 he took a position in the electrical engineering department of the New York Central Railroad; his work there was chiefly in connection with the transmission lines and sub-stations then being designed for the New York terminal electrification.

In 1905 he became associated with a

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firm of coring engineers in New York. He has been engaged on a number of import pieces of work, namely, the report the Commission on Electric Lighting the City of New York, a report to the International Railway Company of Buffalo on their contract for water power, a detailed experimental investigation of the manufacture and annealing of the so-called "Silicon Iron," the electrification of the Cascade Tunnel the Great Northern Railway, various reports on the possible hydro-electric developments along the Northern Pacific Railway, and the possible electrification of certain sections of this road, and a report to the Public Service Commission of New York on the energy meters in use in New York City.

He is the author of a large number of professional papers published in the Philosophic Magazine, the Comptes Rendus, and various electrical engineering journals.

**AWARICABOT MEDALS**

The Cabot medals for the greatest physical improvement during the past year have been awarded as follows: Marcus A. Rossman 1911, Frank W. Caldwell II, Alexander G. Herreshoff, Jr. 1912, Daniel G. Herreshoff 1912, and John Hall 1912. Honorable mentions, Auras P. Hornor 1912, Hubert O. Maxwe 1912, Edward C. Mayers 1912, Henri L. Partidge 1912, and Richard C. Stiney 1912.

The awarding committee was Dean Alfred E. Burton, Profs. Samuel C. Prescott and Frederick H. Bailey, and Mr. Winifred C. Towne, instructor in physical training.

**TO STUDY IN EUROPE**

The Technology Architectural Traveling Scholarships has been awarded to Ralph John Batchelder 1908, of Cambridge, Mass. The holder of this scholarship receives one thousand dollars and travels in Europe for one year, beginning Sept. 1, 1909.

Batchelder is a graduate student at the Institute, and receives the degree of M. S. this year. Last year he won the \$50 prize offered by the Boston Society of Architecture for the best solution of a special problem by fourth year regular students.

First mention was awarded to Joseph T. Monn 1907, second mention to Kinker Kibby 1908. The other competitors were W. Dolke 1908, C. F. Baker 1907, H. D. Candler, G., C. C. Ford 1908, Louis Pittin, G., and W. B. Kirby 1907. The judges were Prof. Desire Despradelle, S. V. Mead and A. H. Cox of the instructing staff, Guy Lowell 1894, and President Peabody of the Boston Society of Architects.

**MANAGERS CHOSEN**

Dudley Clapp 1910 General Manager of Tech Show

Garne A. Joslin 1909, general manager of the Tech Show, 1909, announces today the appointments to the management of the Tech Show, 1910. The appointments follow: General Manager, Dudley Clapp 1910, of Dorchester; Business Manager, Irving White Wilson 1911, of Brookline; Stage Manager, Kenneth Greenleaf 1911, of Savanna, Ill.; and Advertising Manager, Henry Clarence Davis, Jr., 1911, of Fort Andrews, Mass.

Dudley Clapp, the new General Manager, highly deserves the position to which he has been appointed. In his sophomore year he was second assistant advertising manager, and this year he was advertising manager. He has written many lyrics besides. His work has been highly efficient, and has had much to do with bringing the Show through the year with a profit of \$1,250.

**THE "TECH" FLORIST**

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