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Although communications may be published unsigned if so requested, the name of the writer must in every case be submitted to the editor. **THE TECH** assumes no responsibility, however, for the facts as stated nor for opinions expressed.

IN CHARGE THIS ISSUE

Frederick W. Adams '21 William H. Irwin '21

WEDNESDAY, MAY, 28, 1919

THE SPRING ELECTIONS

NOMINATIONS are due tomorrow for class officers and members of the Institute Committee. Who is to be nominated? Are there to be few nominations, a few personal friends offered to the student body from whom to select the men to represent them next year? Or will there be many nominations, will there be many fine, upstanding, capable men to choose from, men respected by their fellows, men who will have the confidence of the faculty, and who will gain honor with the alumni? Every large body of men may be judged and graded by the men it chooses to represent it. It is not as easy as it seems to repudiate them after they are elected. Every man who criticizes the Institute Committee does not criticize them as much as he criticises himself and his fellows. There is just one time each year to criticize the Institute Committee, and that is now. Criticize it with your votes. If you have not been satisfied with it in the past, elect a Committee which will give satisfaction. If you think it has lacked initiative and decision, nominate and elect a Committee which will have these qualities. A Committee which will not stand idly by while the Institute is dishonored, men who will have the moral courage to stand up in a public place and protest against such dishonor.

What would an automobile be without a steering wheel, a powerful steam engine without a governor? Government is the steering wheel, the governor of people. It leads and restricts. Without government a nation would be a headless monster. The Institute Committee is student government. Is it going to be a credit to us or not?

The Institute is large, so large that many of us do not feel ourselves an integral part of it. Nevertheless we are, and at no time will we realize this more deeply than when we graduate. An Englishman is always an Englishman, and a Tech man, a Tech man. Then, after we leave her walls, we will have the interest of the Institute more deeply at heart than at any other time. This is unfortunate in some ways, but it is true. Yet at that time our opportunity for bettering the Institute will be far inferior to what it is now. Will we regret our lost opportunity? Will we realize then what chance we had of guiding the character of the Institute into firmer, better channels? The opportunity is now, let there be no regrets.

You may ask what you may do. Simply this, if you know any men among us, whom you respect for fine characters, high ideals, nominate them, get your friends to nominate them, then back them for all you are worth.

Alumni Notes

Professor **EDWARD C. PICKER**, a former member of the Institute faculty who died recently, has been eulogized in an article written by Henry N. Russell of the Princeton University Observatory, parts of which follow:

"By the death of Edward C. Pickering, American science has lost one of its most distinguished figures, one of the most noteworthy contributors to its progress during the past forty years, and one of its most inspiring and influential leaders.

"Born in Boston, in 1846, of an old New England family, and a graduate of Harvard of the class of 1865, after two years as instructor in mathematics he became professor of physics at Technology, where he established the first laboratory in America where students were instructed by actual contact with physical measurements and instruments. Upon the death of Professor Winlock, Dr. Pickering was called, at the age of thirty-one, to the directorship of the Harvard College Observatory, which he held for nearly forty-two years.

"At this time most observatories were devoting themselves mainly to the old 'astronomy of position'—the determination of the apparent positions of the stars and other heavenly bodies upon the celestial sphere, and of those constants of nature which can be derived from such observations and the 'new astronomy' (now better known as astrophysics) was in its infancy. It is characteristic of Professor Pickering that he realized at once in what direction the greatest opportunities lay, and set to work to employ the full resources of the observatory in fundamentally important work. The 'old astronomy' was not neglected but the astrophysical work, under Dr. Pickering's directorship, is of incomparably greater volume and importance.

"He was never contented with the adoption of the methods and instruments of investigation which he found in use, but was always designing new ones, with a view to increasing the accuracy of observation, and, above all, to obtaining rapidity without sacrificing accuracy. Particularly in the latter was he indeed a master. He possessed the genius for organization, which would undoubtedly have brought him both wealth and fame in the world of business; but he preferred to devote these talents to the service of science, and because of them, enjoyed work of a sort which most men would have regarded as drudgery. All that could be done by assistants of moderate capacity was left to them, and the whole working time of the experienced specialist was devoted to such parts of the work as they alone could do. To extend the study to the stars of the southern hemisphere, a station was established at Arequipa, Peru, in 1890, and has been actively maintained ever since, and another has more recently been set up in the island of Jamaica.

"In visual photometry, Pickering started almost de novo, devising new measuring instruments, with which observations of all the accuracy necessary for his purpose could be made with great rapidity—notable the meridian photometers, with which the brightness of stars is measured, as they cross the meridian, by comparison with some circumpolar star which is always available as a standard. With these instruments more than forty-five thousand stars have been observed at Cambridge and Arequipa, and the resulting system of visual stellar magnitudes has been generally adopted as the international standard. When to these observations most of which were made by Professor Pickering himself, are added his numerous measures upon variable stars, satellites and other objects, the whole number of photometric settings which he personally made rise to the amazing total of more than a million and a half.

"He was also a pioneer in stellar photography, and especially in the use of the doublet lenses, which combine great light grasp with a wide angle of field, and can, with an exposure of an hour or two, record on a single plate the position and magnitude of a number of stars which may run into the hundreds of thousands. The plates are developed, indexed, and filed in the great 'Harvard Photographic Library.'

"The third principal field of work is in stellar spectroscopy. Dr. Pickering led again in the photography of stellar spectra with the objective prism and in the more precise classification of stellar spectra which this made possible. Assisted financially by the liberal aid of the Henry Draper Memorial, he and his very distinguished assistants, Mrs. Fleming and Miss Cannon, studied these spectra, devised the empirical classification of the original Draper Catalogue, and improved upon this by omitting some of the original classes and re-arranging others, until the resulting classification

proved so convenient, and so remarkably representative of the actual facts, that it was adopted without a dissenting voice by the International Unions for Solar Research as a universal standard. The fact, which was first brought out by this investigation, and served as a basis of the final classification, that the spectra of almost all the stars fall into a single sequence, along which each type grades almost imperceptibly into the next, is now recognized as the very foundation of modern astrophysics, and the progress of discovery serves steadily to emphasize the importance of classification according to spectral type in the most diverse problems of sidereal astronomy.

"One other series of investigations that should not be passed over deals with photographic photometry. This was one of the chief interests of his later years, and an increasing part of the work of the observatory was devoted to it.

Finally, and by no means least should be recorded his deep interest in, and support of, cooperation between the whole fraternity of astronomers whether in this country or abroad. There was hardly an organization for the furtherance of any specific astronomical aim, such as the Committee on the 'Carte du Ciel' or the Solar Union, in which he did not take an active part, and his counsel and advice were always of weight. But equally influential, though less conspicuous, was his ever generous aid to individual investigators, to whom he was continually transmitting invaluable material from the treasures under his charge, sometimes observations already made, but unpublished, and again data concerning stars which had been put upon his observing lists for that especial purpose. His abiding willingness to use his powerful influence to aid other astronomers in obtaining instruments for the expansion of their researches, or funds to provide assistance in the reduction and publication of their observations, is known to all.

"Such a career deserved unusual recognition, and received it in a merited degree. Almost all the honors of the scientific world fell to his lot, and the list of these distinctions is too long to detail here. But those who knew him will mourn less the disappearance of the distinguished leader of science than the loss of a warm and loyal friend, one of the kindest and most generous of men.

FRESHMAN TENNIS TEAM VICTORIOUS AT EXETER

Men of '22 Win Fifth Consecutive Victory

The freshman tennis team won its fifth consecutive victory on Saturday by defeating the strong Exeter team four matches to one. Exeter recently won the interscholastic championship, and this speaks very well for the freshmen's ability. W. A. Cauldwell won his match from R. N. Barnard, the interscholastic champion, in straight sets. J. R. Elliott defeated J. Farnam of Exeter in three hard fought sets; Elliott's overhead smashes were a feature. Elliott and Scott had defeated Barnard and J. Farnam in one set 11 to 9, when the match was called to allow the freshmen to catch a train.

The freshman team will meet the Sophomore team on Wednesday. The Sophomore team is composed of McWane and West, two Varsity players, and probably L. Davis and Hatch.

The summary: Singles: W. H. Cauldwell '22 defeated R. N. Barnard, Exeter, 6-1, 6-4. J. R. Elliott '22 defeated J. Farnam, Exeter, 3-6, 6-4, 6-0. W. R. Scott '22 defeated C. Farnam, Exeter, 6-4, 6-3. H. Beattie '22 lost to R. Wright, Exeter, 5-7, 7-5, 4-6.

Doubles: Cauldwell and Beattie '22 defeated C. Farnam, and Wright, Exeter 6-4, 6-1. Elliott and Scott '22 versus Barnard and J. Farnam, Exeter called off, 1922 leading 11-9.

CORPORATION ANNOUNCES PROMOTIONS IN STAFF

The Corporation of the Institute announces the following promotions in the instructing staff made at its last meeting:

C. W. Doten of Garfield street, Cambridge, has been promoted to Professor of Political Economy. Professor Doten has just returned to the Institute after two years spent in Washington, where he had an important appointment in the statistical work of the war.

The following assistant professors have been made Associate Professors: H. C. Bradley, Dept. of Drawing and Descriptive Geometry. F. E. Armstrong, Dept. of Political Economy; C. E. Locke, Dept. of Mining Engineering and Metallurgy; N. C. Page, Dept. of Electrical Engineering; A. F. Holmes, Dept. of Mechanical Engineering.

The following instructors have been raised to faculty rank as Assistant Professor: J. B. Babcock, 3d. Railroad Engineering; S. A. Breed, Mechanical Drawing and Descriptive Geometry. L. F. Hamilton, Analytical Chemistry; H. B. Luther, Civil Engineering; C. S. Robinson, Industrial Chemistry; R. H. Smith, Mechanical Engineering; C. E. Turner, Biology and Public Health.

HEAVY CASUALTIES EXPECTED

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will consider concealment of such an injury sufficient cause to forfeiture of a 3. Participants are strongly advised to wear identification tags on all parts of the body so that the various members may be collected and properly classified after the struggle.

4. Missing eyes, feet, heads, etc., should be promptly claimed. An attempt will be made to return them to their proper owners but unclaimed limbs will be turned over to the department of organic chemistry for analyses and identification.

5. It is requested that competitors file blood samples with the Registrar before the Rush so that it may be accurately recorded how much each contestant has contributed to the fertility of the great court.

The Rush is scheduled to take place in the Great Court tomorrow noon at 1:15 o'clock and in preparation for this, the "Koop" was placed in the Court Monday, and has since received a brilliant coat of "camouflage." The Technique Board will march from Walker shortly before 1:15, accompanied by the famous Technique Band and after marching around the Court, the various members of the Board will take their places to act as judges. The rules of the Rush will be announced by the Editor in Chief, after which the winners of the Grinds and Statistics contests will be announced.

Soft shoes are required in the Rush, and only those who have their preliminary signups may enter. Slugging or unnecessary roughness is not permitted, and a book taken from a man when he is fairly away from the top of the Koop will be returned to the man from whom it was taken.

A shot will then be fired, and the fight will begin. There is a slot in the top of the "Koop" and it is through this slot that the twenty shingles, for which all of the fighting occurs, are passed. For one minute, no shingles will be passed through the slot and then a second shot will be fired, and the first book will be sent up. The rest of the shingles will follow, the first four in the proper order, but the twentieth book will come at any place between the fourth and its regular place. All of these books will be autographed by President MacLaurin, while the first four and the twentieth will be free. If any man has paid his final \$2, and gets one of these free books, his money will be refunded. After the Rush, the men who have secured shingles and those who have made their final payments will fall in line. Those who have not made this payment will be given an opportunity to do so at this time, but will fall in another line.

The preliminary signups will reserve a book for only one week after the Rush, for at this time the books will be placed on general sale, and the price increased. A final signup will reserve a book at the regular price, and this noon is the last opportunity to make this final payment prior to the Rush.

Technique has practically ceased to be a class book this year, and has become an Institute book. In addition to the regular Board consisting of Juniors, a freshman and a Sophomore Board have assisted in the preparation of the book, and each class has been given a section for its own informals, history, and so forth. The book contains more informals than any Technique has boasted heretofore, as well as the formal pictures of about four hundred of the men who graduated last fall, and of those who are now Seniors.

Owing to the fact that classes will be held as usual all day Thursday, it is necessary to start the Rush on time. The contestants will gather in the Great Court shortly after 1 o'clock, and will file into the roped-off area from the north end after the Board arrives. Signup cards will be required.

TECHNOLOGY WINS MEET

(Continued from page 1)

nology placed third in the broad jump in the high jump. Fitts of Tufts and Ash and Frease of Technology were tied for second place. Dempsey of Boston College was winner of the broad jump with a distance of 21 feet 1 inch to his credit.

Nichols of Brown was the winner of the discuss throw and placed second to Allen of Maine in the shot put.

The summary:
One Hundred Twenty-Yard Hurdles
 Final heat—Won by K. B. Low, Amherst; second, P. E. Burbank Wesleyan; third, C. W. Seranton, Technology; fourth, P. W. Lumgren, Worcester P. I. Time—17s.

One Hundred-Yard Dash
 Final heat—Won by W. Rollins, Technology; second, R. H. Mullane, Brown; third, R. J. Keeler, Wesleyan; fourth, J. T. Sullivan, Mass. A. C. Time—10 2-5s.

Two Hundred Twenty-Yard Hurdles
 Final heat—Won by W. A. Savage, Bowdoin; second, R. J. Keeler, Wesleyan; third, R. W. Besser, Brown; fourth, W. L. Parent, Bowdoin. Time—26 2-5s.

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