

N. Y. TECHNOLOGY CLUB HEARS GEN. GOETHALS

Panama Canal Builder Outlines Difficulties and Problems of Construction at Luncheon Friday

HUNDRED AND FIFTY PRESENT

Major General Robert Goethals, the constructor of the Panama Canal and its administrative organizer, was the guest of honor at a luncheon given at the Technology Club of New York last Friday. After the lunch the General spoke to the members of the club, outlining incidents and problems which arose during the building and operation of the Canal. The main topics considered were taken up under the head of the slides, the military defenses of the Canal, the lock construction, and the operation of the toll system. The General was introduced by Mr. R. H. Howes, president of the club.

As the topic which apparently had aroused the greatest interest in connection with the Canal, General Goethals opened his talk with a description of the great slides which so impeded navigation and construction. There are, he stated, three classes of slides, geologically considered. The first simply arises from the fall of surface strata originally rising at too sharp an angle; the second from the breakage of strata, and the third from the crushing and buckling of weak strata beneath the weight of harder rock. This latter phenomenon was responsible for the slides in the Panama Canal. In every case the upper rock split away from the substratum for a distance sometimes reaching 1500 feet; the separated portion sunk, at the same time causing the floor of the channel to heave up and in some cases producing islands or even peninsulas in the waterway. This happened Oct. 14, 1915, when the east bank opposite Culebra, 350 feet high and for a distance of 1600 feet, sank 20 feet vertically. In the space of an hour that afternoon, the water in the Canal decreased from 45 feet to 9 inches in depth opposite the area in subsidence. On another occasion an island of material was forced to a height of 100 feet above water-level in the center of the Canal. Both banks at Culebra gave trouble to such an extent that the only remedy has been to widen the Canal

(Continued on page 2)

AMERICAN COWBOY BALLADS

Professor Lomax to Speak on Songs and Verse of the Far West

At 4 o'clock today, Professor John A. Lomax, Secretary of the University of Texas, will give a lecture on "American Cowboy Ballads," in Room 10-250. Professor Lomax has studied extensively the music and poetry of the sparsely populated west and southwest and has spread the knowledge thus attained by many lectures at the leading colleges and universities. His talks on these ballads will be interesting to Technology men chiefly on account of the light that they throw on the life of the pioneer, and also for the information they contain relating to the conditions and habits of the American cowboy.

According to Professor Lomax, the true spirit of the cowboy has been often slandered and misunderstood both by the stage and by the press, and it is only through a close study of their carefree songs that one may reach the confusion with Professor Lomax, that "Dauntless, reckless, without the unceremonious purity of Sir Galahad, though as gentle to a pure woman as King Arthur, he is truly a knight of the twentieth century."

1919 TECHNIQUE COMMITTEE

The 1919 Technique Electoral Committee will meet for the first time Friday afternoon, January 5, at 5:00 o'clock, in Room 4-231. This will be the only meeting of the Committee before the mid-year vacation, and as important business will be brought up, it is particularly desirable that all members attend.

RIFLE TEAM

Ten Men to Be Selected for Indoor Matches

The proximity of the indoor matches, two of which are to be shot before mid-year, makes it necessary that the men who will constitute the team begin practice at once. The following men are chosen as tentative members of the ten man squad, although all positions are open to competition: G. R. Bond, W. S. Burbank, K. S. M. Davidson, F. C. Howard, G. A. Irwin, J. C. Irwin, Jr., A. S. Johnson, G. M. Lovejoy, T. E. Stahl, and A. E. Tuttle.

Captain Stahl will be at the Cambridge Army range today from 4 to 5 o'clock and Friday from 3 to 5 o'clock to give instructions as to the course of practice to be followed. At that time he wishes to meet those men who intend to try out for the team.

Friday at 5 o'clock, in the Rifle Club Office, Room 1-075, there will be an important meeting of candidates for the team, when the conditions for the matches will be explained.

COURSE X-A TO START

School of Chemical Engineering Practice Opens Next Term

The new School of Chemical Engineering Practice will open on next Feb. 5 with the opportunity for obtaining operating experience at each of the stations exceeding what was at first hoped for. At a meeting of the directors of the five stations recently held at the Institute the details of the plan were considered and important questions of policy were determined.

The directors of the stations who appear in the accompanying photograph are:

Hugo H. Hansen, S. B., M. I. T. '12 for one year assistant in the Research Laboratory of Applied Chemistry at the Institute and for three years the chemical engineer in charge of the research and development work of the Brown Brothers, Inc., at La Tuque, Que.

Guy H. Buchanan, A. M., Washington and Jefferson, S. B., M. I. T. '13, for two years head of the Research Laboratory of the New Jersey Zinc Co., and for one year superintendent of the acid plant of this same company at Martins Ferry, Ohio.

Ernest W. Westcott, B. S., Harvard, Ph. D., M. I. T., for a number of years in active research work in chemistry and physics, receiving the degree of Ph. D. for the work done in the Research Laboratory of Physical Chemistry at the Institute.

Leslie T. Sutherland, S. B., Cornell, for three years director of the research and development work of the Royal Baking Powder Company of New York City.

Samuel H. Salisbury, Jr., M. S., Lehigh, previously chemical engineer at the Merrimac Chemical Co. of Boston and for the last two years assistant professor of Chemical Engineering at Lehigh University.

FRATERNITY PHONES

The following is a revised list of fraternity telephone numbers which have been compiled by the Institute Committee:

Alpha Tau Omega, Back Bay 53137; Beta Theta Pi, Back Bay 75559; Chi Phi, Back Bay 3515; Delta Kappa Epsilon, Back Bay 51889; Delta Psi, Cambridge 5067; Delta Tau Delta, Cambridge 6597; Delta Upsilon, Back Bay 4375; Kappa Sigma, Back Bay 51568; Lambda Phi, Back Bay 8839; Lambda Chi Alpha, Back Bay 4074; Phi Beta Epsilon, Back Bay 51825; Phi Gamma Delta, Back Bay 52798; Phi Kappa Sigma, Back Bay 51369; Phi Sigma Kappa, Back Bay 54565; Sigma Alpha Epsilon, Back Bay 1935; Sigma Chi, Brookline 5338; Theta Chi, Back Bay 5549; Theta Delta Chi, Back Bay 71287; Theta Xi, Back Bay 1022-R.

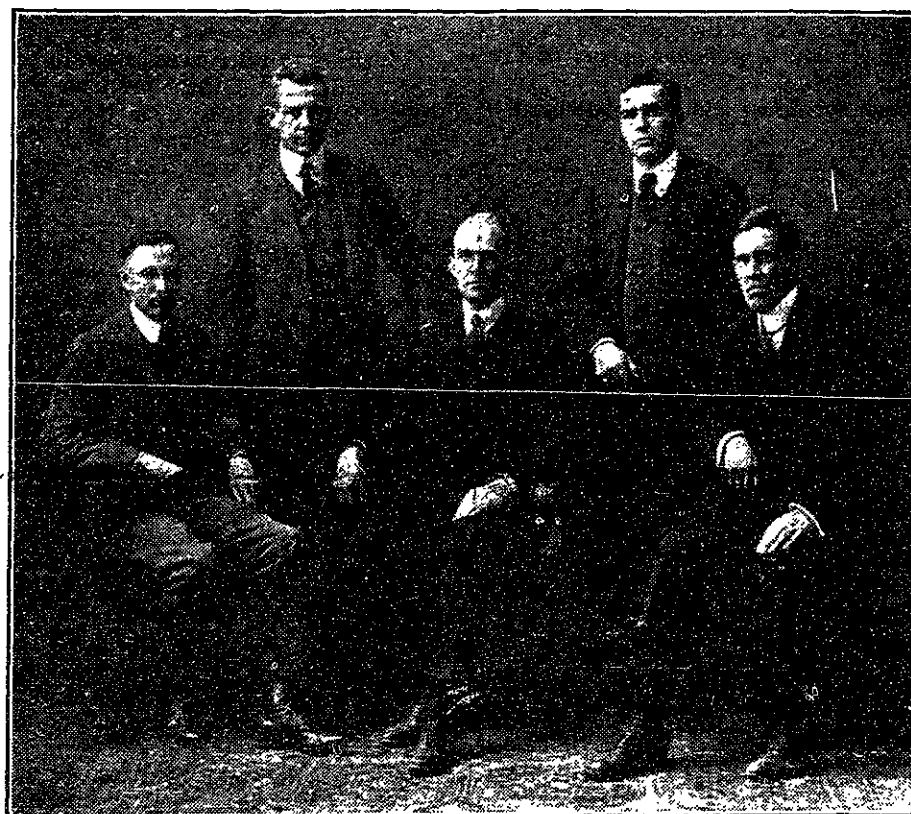
T. C. A. HOLDS MEETING AND DINNER

Dean Burton and Bursar Ford Attend—Organization's Work Praised—Year's Budget Announced

MANY STUDENTS SPEAK

On the Friday before the Christmas recess, the Cabinet and Advisory board of the Technology Christian Association held their semi-annual meeting, which was preceded by a dinner. Among those present were Dean Burton, Bursar Ford, Mr. W. B. Snow, who is chairman of the Advisory Board of the T. C. A.,

(Continued on page 4)



SALISBURY, HANSON, BUCHANAN, WESTCOTT, SUTHERLAND

E. E. SOCIETY

Mid-year Tour to Schenectady, Niagara and New York Planned

The annual mid-year trip of the Electrical Engineering Society will begin this year with a two day visit to the two large plants of the General Electric Company and the American Locomotive Works at Schenectady. Here machinery from the most delicate galvanometers to the giant Mallet locomotives will be seen in the process of construction. From there the party will go to Niagara Falls and New York City, also stopping at the Lackawanna Steel Mills for a day. It is probable that the society will be a day in Newark studying the new automatic switchboard which is being tested out there. The party will be accompanied by one instructor for every ten men. In this way the society will be divided into small groups when going through a plant and so there will be ample opportunity for asking questions as well as studying details.

The men will leave Sunday, Jan. 28 and return to Boston on Sunday, Feb. 3. There is a notice posted on the door of the E. E. Society office for the signatures of those who are going on the trip. The management will try to get in touch with them as soon as possible. An effort is being made to secure a special car for the members.

CAF RAISES PRICES

The price of the regular dinner which is served from 5.30 to 6.30 o'clock in the Caf daily except Sundays was increased to thirty-five cents beginning yesterday. A limited a la carte service will be available for those who desire it.

ENGLISH HIGH CLUB

All graduates of Boston English High School at the Institute who are interested in the formation of an English High Club will meet in Room 2-290 this Friday at 5 o'clock.

RESERVE ARMY EXAMS

Applications Due Jan. 15—First Exam Held Jan. 29

Competitive examinations for commissions as Second Lieutenant in the Reserve Army will be held Jan. 29. Applications for examination must be in the hands of Adjutant General H. P. McCain, War Department, Washington, D. C., before Jan. 15.

The mental examinations are as follows:

BIG TRACK MASS MEETING ON FRIDAY

Plans for Coming Season Will be Announced—All Track Candidates Must Attend—Board Track Now Ready for Use

TRAINING BEGINS LATE IN SEASON

Next Friday there will be two track meetings, in Room 10-250 at 4 and 5 o'clock, so that all prospective track candidates will be able to attend. Coach Kanaly wishes to impress everyone with the necessity of being present at one of these meetings. According to the management there can be no excuse for cutting this meeting and everyone is expected to be present. Announcements will be made at these meetings concerning prospects for the season, the various events, what is expected in training, and advice as to how to dress for running.

The new board track has been completed and is now ready for use. It was put down during the Christmas holidays and measures approximately thirteen laps to the mile, while on one side a straightaway of seventy yards has been secured. For some time negotiations had been under way to secure the B. A. A. track, but these failed and the present track is the Institute's exclusive property. It has been constructed in sections so that it can be taken up and put down as desired. In the future it will be put down directly after Field Day.

Although prospects are bright for a successful season, this is the latest that Technology runners have ever started for winter work, so that the management does not expect too much. The first meet will probably take place about Jan. 20 at the Coast Artillery games, when both the varsity and the freshmen will be represented by a yard relay team. Technology will oppose Harvard, and freshmen will not only be eligible for the 1920 team, but for the varsity team also.

PACK AND PADDLE

Will Hold Hike Through Brookline Next Saturday

The Pack and Paddle will hold a hike next Saturday afternoon through Forest Hills and the park lands around Brookline. Mr. I. B. Crosby, instructor in English, will have charge of the party and will act as pathfinder. There is a possibility that enough snow will be on the ground to permit snowshoeing. The hike will start at 1:45 o'clock from Room 1-175, and will terminate on the Boylston Street car line at 5:30 o'clock.

SWIMMING TEAM PRACTICE

In preparation for the swimming meet with Amherst on Jan. 13, all members of the squad will be expected to practice daily. In this dual meet Technology will have its first opportunity to show the real caliber of the team, and it is desirable that all men be in good condition.

THERE WILL BE A NEWS MEETING IN THE TECH OFFICE TOMORROW AT 1.05 O'CLOCK.

CALENDAR

Wednesday, January 3, 1917

4.00 P. M.—M. I. T. Orchestra Rehearsal.

4.00 P. M.—Professor J. A. Lomax's Talk on "American Cowboy Ballads," Room 10-250.

4.00 P. M.—Rifle Team Practice, Cambridge Armory.

6.00 P. M.—Catholic Club Meeting and Dinner, Cafeteria.

Thursday, January 4, 1917

7.00 P. M.—Combined Musical Club Members Meet at Park Street Subway Station to Attend Concert in Charlestown.

VAIL LIBRARY OPENED

Reference Books on Electrical Engineering Now Ready

Students may now obtain books for reference from the Vail Library of Electrical Engineering by applying at the temporary library, Room 3-003.

Mr. Chapin, the assistant librarian, will have charge of issuing books for circulation and will help the students to find the volumes they wish. The catalogue of this library is in the same room.