

THE TECH

VOL. XXXIII. NO. 103.

BOSTON, MASS., WEDNESDAY, DECEMBER 17, 1913.

PRICE TWO CENTS

LARGE CROWD AT WINTER CONCERT

Special Features Received With Applause—Dancing Follows.

Copley Hall was filled last night at the annual Winter Concert of the Combined Musical Clubs. The hall was decorated with Technology banners, and the front of the stage covered with flowers. The hit of the evening proved to be "Echoes of '61," which was rendered by the combined clubs; the singing of the Glee Club from the rear of the hall in this piece was very effective. The Banjo Club responded to an encore wearing red and gray hats; another feature of this Club was the American flags on the banjos while they played "The Stars and Stripes Forever." The Glee Club Quartet made its first appearance for this year and gave several good selections.

A long dancing program, consisting of twenty-two numbers, followed the concert. The matrons were Mrs. Richard C. MacLaurin, Mrs. Alfred F. Burton, and Mrs. Henry P. Talbot.

The program consisted of the following selections:—

The Sword of Ferrara	Bullard '87
Glee Club.	
Medley	Arr. by Suris '14
Mandolin Club.	
Three for Jack	Squires
Glee Club Quartet.	
Darkies' Dream	Lansing
Banjo Club.	
Intermission.	
Echoes of '61	Arr. by Odell
Combined Clubs.	
The Long Day Closes	Sullivan
Glee Club.	
Operatic Mosaic	Arr. by Odell
Banjo Club.	
Mrs. Winslow's Soothing Syrup.	
Glee Club Quartet.	
Song of the Boatmen on the Volga	
Russian Folk Song	
Mandolin Club.	
Stein Song	Bullard '87
Glee Club.	

SHOW CANDIDATES

Call For Publicity Men Issued—Competition Begins At Once.

The first call for candidates for assistants on the publicity department of Tech Show 1914 was made Monday, but only a small number of men showed up. This is attributed to the fact that the Freshmen had drill and gym Monday, so another opportunity is to be given those who wish to enter the competition.

Assistant Publicity Manager E. W. Lucas, Jr., will be in the Show office today at 1.30 and at 4.30 to meet candidates. He will again outline the plans of the publicity department and the duties of the assistants.

This competition is a short one, lasting only a few weeks, but it is necessary that it be started at once and all men who wish to enter must begin work immediately.

The Wesleyan Athletic Council has voted not to have a game with Yale next fall.

DISTRIBUTING SYSTEMS SUBJECT OF LECTURE

Mr. L. L. Elden Of Edison Company Gives Interesting Talk To Electricals.

At the beginning of the meeting of the Electrical Engineering Society held in the Union last evening, the President announced that the dinner would be given about January 6 at a down-town hotel, the cost to be probably one dollar. Vice-President Mathew C. Brush, of the Boston Elevated had promised to speak, but because of the labor arbitration meetings will be unable to attend; however, the President has promised another distinguished speaker. He also announced that there is only room for two more men on the annual mid-year trip. There will be a trip to the Fore River Shipyard about January 1.

Mr. L. L. Elden, of the Edison Electric Illuminating Company of Boston then spoke on the subject of distributing systems. He told of the first electric lighting system installed in Boston, which was constructed thirty-five years ago, and the development up to this time, when they use 225,000 kilowatts. To give an idea of the size of his company, he said that they had absorbed twenty-five other companies during that

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RIFLE CLUB

Match With Worcester Polytech Arranged—Practice In Vacation.

The Rifle Team will shoot two matches the week following vacation; the indoor range will be available immediately after the holidays and the season ought to begin with a flying start. The first will be with Worcester Polytechnic Institute, where a club and team have just been organized, and will be in the nature of a practice match. As the second match will open the intercollegiate season it is desired that the team get into shape during the coming vacation. Any Rifle Club men leaving their names at the Cage, today or tomorrow, for G. G. Haslam, Team Captain, will have one hundred targets apiece left for them. No men who have not paid their dues will receive targets.

It is probable that a match will be shot with the fast team of the Brookline High School during the second week in January.

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ATHLETIC ASSOCIATION

It was voted at the meeting of the Executive Committee of the M. I. T. A. A. held yesterday afternoon to award numerals to the winning team in the inter-class wrestling meet. This action is, however, only a recommendation, since the matter must be finally decided by the Advisory Council.

A motion was also passed providing for the appointment of a committee of three members, including the President, to revise the constitution.

TECH MEETS HARVARD ON THE ICE TONIGHT

Opponents Are Strong In Defense—Tech Lacks Experience But Has Good Men.

The big hockey game of the season for Tech will be played when she clashes with Harvard at the Arena tonight. A victory will mean a great deal to M. I. T., as a defeat of last year's intercollegiate hockey champions would give Tech considerable prestige in hockey circles. With this in mind, Capt. MacLeod put his squad through a severe practice yesterday morning. The men are gradually acquiring team work, and it will make Harvard's much-vaunted defense hustle to stop the rushes. Harvard realizes this and, for the first time in its history, the team indulged in a Sunday practice after their defeat by the B. A. A. Saturday night. Harvard's individual play has been excellent so far this season but, like Tech, her team work has been rather crude from lack of practice.

The Harvard team is composed of many stars this year, as it was last year. Captain Willetts is a sterling man for the defense both for his clever manipulation of the stick and his weight. Clafin, his team-mate, is on a par with him in this line of work. The latter's all-round playing has been the feature of the year. Carnochan at goal completes a trio, the equal of which is hard to find on any of the college hockey teams. The only reason that Carnochan did not play on the regular team last year was that Captain Gardner, chosen goal of the All Champion College Hockey Team, played that position. Phillips and Hopkins in the forward line played on last year's team, and are rounding into last year's form. Sid Clark, their new man, is Harvard's great baseball player.

(Continued on page 4)

MINING TALK

Well-known Consulting Engineer To Address Mining Society This Evening.

The Mining Engineering Society will hold a meeting in the Union at 8.00 P. M. today, at which W. Spencer Hutchinson, M. I. T. '92, will speak on "Faults and Unforeseen Difficulties in Mining Development."

Mr. Hutchinson is a well-known consulting engineer, who makes his headquarters in Boston. His work has, however, carried him to all parts of this country, where he has had the best possible opportunities for becoming acquainted with the problems offered by different types of mines.

TECH SHOW ORCHESTRA

The last regular rehearsal of the Tech Show orchestra before the holidays will be held this afternoon at five. The orchestra at present is in need of a bass viol and a clarinet. Anyone playing either of these instruments, who is interested in the Show, is asked to report to the Manager in the Union any Wednesday after 4.30.

SANITARY ENGINEER TELLS OF PROBLEMS

Former Tech Student Gives Talk On Work In Meat Packing Industry.

Yesterday morning Mr. George H. Shaw, Sanitary Engineer with the United States Bureau of Animal Industry, spoke before the class in Public Health Problems. Mr. Shaw was connected with the Biological Department of the Institute some years ago, having worked in Course XI as a special student. He took as his subject "Some Aspects of Sanitation in the Meat Packing Industry," and gave a short review of the work which he is doing, and of the work which he is trying to do in the way of reform and improvement in the industry mentioned. His speaking was rather unexpected, since he was in town only for a short stay, so that both his talk and the invitation extended by Professor Sedgwick were in a sense on the spur of the moment.

In past years, said Mr. Shaw, no sanitary engineer was connected with the Animal Industry Bureau. The work was done wholly by trained veterinarians, who indeed attained a degree of skill in the empirical inspection of plants, but who were not qualified to do the same grade of work as a strict sanitary engineer. He is the first of such engineers to be appointed.

Mr. Shaw has charge of all the slaughter houses in the country, but only as far as their operations are interstate. He has been able to make several changes in the workings of them which are for the better according to modern ideas of sanitation. In so far as possible, for instance, wooden floors, walls, and shelves have been done away with. In many abattoirs it was formerly the custom to

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CALENDAR

Wednesday, December 17, 1913.

1.30 and 4.30—Candidates for Asst. Pub. Man Tech Show—Show Office.
1.30—Professor Spofford talks on Course I and II—49 Eng. A.
4.00—1917 Executive Committee—Union—Postponed to Thursday.
4.00—Professor Walker talks on Course X—11 Eng. B.
4.15—Boat Club Officers' Meeting—Union—Postponed to Thursday.
7.15—Brotherhood of St. Andrew—93 St. James Ave.
8.00—Tech vs. Harvard Hockey—Arena.

Thursday, December 18, 1913.

1.00—Professor Talbot talks with Course V—6 Lowell.
1.00—Professor Richards meets Course III Men—2 Rogers.
4.00—1917 Executive Committee—Union.
4.00—M. E. Talk—11 Eng. B.
4.00—Meeting Boat Club Officers—Union.
8.00—Cosmopolitan Club British Night—Union.

WEATHER

For Boston and Vicinity: Fair, moderate southwest winds.

THE TECH

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WEDNESDAY, DEC. 17, 1913.

In Charge of This Issue

Editor Ralph Millis '16.

Assistants—H. E. Lobdell '17, E. W. Curtin '17.

Technique.

The question blanks which the Juniors will receive today represent the best opportunity which the class as a whole has so far had to contribute to the quality of Technique. Such an opportunity as this forces us to realize what is not always uppermost in our minds—that Technique is in fact representative of the Junior Class, and not merely the affair of the few men who are elected to get it out. Its success will depend upon the manner in which the class stands behind the board, not only in the matter of such little courtesies as the careful filling out of these blanks but in getting advertisements, handing in grinds, and showing an all-round willingness to help out.

Hockey

We regret the erroneous impression given in an editorial yesterday, that the hockey management had been negligent in omitting a display of enthusiasm at the game tonight. Their position is that, since the game is a minor one for Harvard, it would belittle Technology to appear to regard it as important.

We think this point is well taken and that the management is entirely justified in acting in accordance with this idea. In our own opinion, Harvard's attitude is a matter of no concern to us, and we should, without making an ostentatious effort to do so, support our team with all the enthusiasm we can muster; but we acknowledge the hockey management's better qualifications for deciding the question.

COLLEGE NEWS

Six of the eight awards of the Whitney Prize in Architecture made by the Beaux Arts Society were given to Penn. The first prize, however, went to a New York student and the second to Carnegie Tech. The Institute did not compete.

The athletic association at Carnegie Institute of Technology is considering the abolition of football. They expect to develop their track athletics more fully. The Tartan claims this due to the lack of interest shown by the student body in the sport.

Expecting that the United States will soon declare war with Mexico, the cadets at the University of Washington have formed a volunteer company which will be fitted out with full war equipment. The captain and lieutenant have been appointed, and the 122 men needed to form the company are expected to enroll in a short time.—The Evergreen, Washington State College.

Foreign universities are now receiving some of the large private benefactions for which they have long envied American institutions. Some of the figures for the British Isles are: Cambridge University, \$500,000; Bristol University, \$950,000; Glasgow, \$220,000; Leeds, \$50,000. In the latter case the gift was anonymous. In Germany \$2,000,000 has been subscribed to transform the scientific institute at Frankfort-am-Main into a university. The people of Hamburg have raised \$6,250,000 to endow the recently established University of Hamburg.

The new Williams clubhouse in New York City was formally opened last Friday evening.

NOTICE TO EXCHANGES—THE TECH has no objection to anyone copying these items. We simply wish that whoever makes use of them will kindly give THE TECH credit in their columns.

MEETING POSTPONED

The meeting of the 1917 Executive Committee, which was announced for today has been postponed to 4 P. M. tomorrow. At this meeting the question of the class banquet will be considered.

RIFLE CLUB

(Continued from page 1)

Attention of undergraduates is called to the fact that a pistol team is in formation, and any men who are good with this weapon are requested to report.

An important change made in the outdoor intercollegiate matches this year provides rapid fire and skirmish runs; this manner of shooting is very much more exciting than the timed fire, and requires much more practice.

Whitman College has established a point system for the regulation of athletics and to raise the standard of scholarship.

Lehigh will hold its annual minstrel show next Saturday evening.

Queen's University's mock parliament has been in session during the past week.

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TALK ON PIER WORK AND FOUNDATIONS

Subject For M. E. Society Meeting
Of Interest To Men Of
Other Courses.

Thursday afternoon the men who are taking Courses I, II, and X will have an opportunity of hearing one of the most prominent engineers in country. Mr. J. R. Worcester of the J. R. Worcester Co., Consulting Engineers, will speak on "Heavy Foundations and Pier Work" Thursday afternoon at 4 o'clock in Room 11, Engineering B.

Mr. Worcester has made a specialty of bridges and structural steel work. One of his many master achievements is the foundations and truss work of the South Station train shed. Another example of his work is the viaduct across the Charles River. Perhaps the most striking example of his work is the huge bridge across the Connecticut River at Bellows Falls. This is a one-arch bridge with a suspended floor, and is the largest of its kind in the country.

Mr. Worcester has been president of the Boston Society of Civil Engineers. He has also done much important committee work in the Engineering Commissions of some of our largest cities. With such a prominent speaker and with a subject of such vital interest to the members of Courses I, II and X the committee in charge is expecting a large attendance.

At this meeting it will be decided whether first term Sophomores will be admitted to the Society or not. This was to have been decided at a previous meeting which had to be postponed.

ELECTRICAL TALK

(Continued from page 1)
time. At the present day there are on the books of the company the names of 62,000 customers, and 29,000 new meters have been installed this year; 128 automobiles are used in the service department.

He told of the big steps forward made in the transmission of electrical currents. About six years ago all the transformers were laid in the ground which was considered a great improvement over the old method. Now, for the first time in this country, cables armored with steel and lead sheaf are being laid, directly in the ground. These are tested to twice the voltage for which they are intended.

Mr. Elden mentioned as a significant fact that 50 per cent of the total amount of direct current electricity sold over an over an area of 60 square miles is consumed within a space of only 300 acres.

He told the future engineers that one of the hardest problems encountered in practical life is that with which the company has had to cope, namely, that of finding men who have the ability to do the right thing at the right time. In order to test the ability of its employees the company once sent on a false alarm. To reach all the men within a radius of twenty miles only thirty-seven minutes were necessary. All means of transportation were resorted to by the men to reach their headquarters, and the last man arrived for duty one hour and twenty-seven minutes after the first call had been sent out.

As another illustration of the efficiency of the company's organization he cited the case of the Summer Street flood. The plant was under water for a week and a half, but the electric current for the surrounding district was only shut off for one hour and a half.

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TALK ON PACKING

(Continued from page 1)

drag the viscera of slaughtered animals over the floors to the receptacles, and in many small sausage factories conditions prevailed which made well-nigh impossible the thorough cleansing of the plant. Through the substitution of reinforced concrete for wooden floors, and of glass or tile for shelves, etc., a source of serious annoyance was gotten out of the way.

The problem of coolers, said the speaker, is not yet entirely solved. Moisture condenses on the walls of the coolers, and drips upon the food. Some good results have been obtained by the blowing in of air currents, but much is yet to be desired. He suggested that this question would offer a good field for thesis work.

Trouble is at times experienced with water supplies for meat plants. Most of the larger plants have private artesian wells, which are supplemented by the regular supply, and must be carefully watched, lest, in such a vicinity, as that of stockyards or slaughter houses, they become infected. In many small-scale sausage plants on the East Side of New York City there are, also private wells which must be guarded against the influence of city contamination.

Mr. Shaw discussed for a few moments sewage and garbage disposal plants. He noted the prevalence of the use of hypochlorite of lime as a sewage disinfectant. Of all the garbage disposal plants which had come under his notice he described that at Columbus, Ohio, as being the most remarkable. The garbage there is collected by the city and steam-cooked in a municipal cooker. The grease is extracted and used commercially, while the residue is old as fertilizer. The method is used with a yearly profit of \$25,000. In contrast to this reduction method is the incineration method, in which garbage is burned in large quantities, and the residue used as fertilizer. Of the two the latter is the more convenient, since it can be used for all sorts of refuse, but the former is more efficient.

The speaker, described himself as a warm conservationist, and told of an instance in which his judgment in this direction was tested. After the Dayton flood he was sent to the stricken city. He found that the packing-houses in the vicinity, contrary to what is customarily found, are situated on high ground, and that in one particular building hundreds of tons of pork had been covered by water, but not, in his opinion, rendered unfit for use. Although the precedent of the Government in such a case would bid him condemn the meat, he took matters into his own hands and ordered it saved after a certain treatment aimed to purify it. The results fully justified his violation of precedent. Professor Sedgwick, in commenting upon this, praised Mr. Shaw highly for his care

HOCKEY GAME

(Continued from page 1)

Although Tech has suffered more by graduation than has Harvard, it is able to present a good line-up. Captain MacLeod, Fletcher and Storke, veterans, are back.

MacLeod and Fletcher are faster than ever. Storke is regaining the form which he had two years ago. He was unable to play last year because of an injury received in the Dartmouth game, and consequently he was handicapped at the beginning of the present season. Winton, at centre, completes the forward line. He was captain of the Exeter hockey team last year, and is a former Wellesley High athlete. His speed on the ice and his stick work make him a dangerous man. Tech defense is wholly new, the three men being Freshmen. But they come here with a good foundation in the game, having played on their Prep school teams. Cochrane is from Melrose Gould from Newton and Lowengard from New York City.

The forward lines of the two teams are on a par with each other at this stage of the season, since neither one has much team work. Harvard will rely on its defense as she has been doing so far. Tech, on the other hand, has a new defense and must depend on her forwards for keeping the puck in Harvard's territory. Harvard's great advantage is the experience of the team as a whole, while the Tech team is an almost untried combination.

The lineup is as follows:—

Harvard	Tech
Carnochan, g	g, Lowengard
Willetts (Capt.), p	p, Cochrane
Claffin, cp	cp, Gould
Smart, rw	rw, Fletcher
Phillips, r	r, MacLeod (Capt)
S. Clark, c	c, Winton
Hopkins, lw	lw, Storke

Columbia holds the record for enrollment this year. She has 13,229 students, or more than twice the number of any other college. An army of 907 instructors is required to teach them.

in preserving for food use all possible material, instead of condemning indiscriminately wherever the least opportunity of infection had presented itself.

In answering one of various questions asked at the conclusion of the talk, Mr. Shaw spoke of an experiment in sewage testing which he had tried in New York harbor. With the fact in mind that fresh sewage decolorizes methylene blue, tanks of this substance were emptied under water in various parts of the harbor, and men with field-glasses stationed on the statue of the Goddess of Liberty to detect the coloring wherever it occurred. The result, however, could not be vouched for as at all dependable, since the sources of error were so many.

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