

THE TECH

VOL. XXXII. NO. 89

BOSTON, MASS., MONDAY, FEBRUARY 17, 1913

PRICE TWO CENTS

TECH ENGLISH CLASS COMMENCES TODAY

Still an Opportunity for Many Freshmen to Enter New Class.

The class in Freshman English, which is to be held in connection with THE TECH this term, will have its first meeting this afternoon at 4 o'clock. The time was selected in order that the class might be available to men of all courses and sections.

Comparatively few men have yet registered for this course, but it should be understood that it is not too late for any Freshman who received the required grade of not lower than P in his first term work to transfer to this class. Those who are not sure whether they want to enter this class should attend the first meeting this afternoon and decide afterwards.

The opportunities and advantages that this course offers have been pointed out time and time again. The great influence of journalism in modern times on every conceivable institution is enough in itself to make one desirous of getting a chance to study this subject, and indeed many of our colleges have included it in their curriculum.

CHESS CLUB MEETS.

To Consider New Matches—Simultaneous Match Friday.

A meeting of the Chess Club will take place tomorrow at 4 P. M., in the Union. This is the first meeting since the ending of the tournament last term, and the matter of chess matches for the present term are to be considered. Challenges have been sent to both Brown and Amherst, but nothing has been heard from either as yet. A challenge, however, has been received and accepted from the Harvard second team for a return match in the near future. The date of this match has not been decided but will be probably considered at tomorrow's meeting.

This Friday evening the club plays a simultaneous match with Mr. Kenard of the Boston Chess Club. This means that he will play the whole club, advancing from man to man and playing each man in turn. Mr. Kenard is a chess player of considerable reputation, having made ninth place out of the two hundred competitors in an all-American match. Though our club has no expectation of winning, the officers say that they hope to score at least a few points.

T. C. A. POSITION.

Y. M. C. A. Wants Men to Work Three Evenings Each Week.

Director Talbot of the Technology Christian Association is the authority for the statement that the Boston Young Men's Christian Union is desirous of employing a Tech man at its office three evenings a week. The applicant must be willing to devote Tuesday, Thursday and Saturday evenings to the work, and will receive one dollar per evening. If no other arrangement were possible, the Union might consider employing three men one for each of these nights. Applicants can obtain further information from Mr. Talbot.

TEN THOUSAND TONS ORE IN TEN MINUTES

Movies in Huntington Hall Tell Story of Enormous Steel Industry.

Over three hundred Institute men and their friends gathered in Huntington Hall last Saturday night to see the series of motion pictures entitled "From Mine to Molder," and given under the auspices of the Civil Engineering Society. The assembly was first addressed by Mr. H. B. B. Yergasson, advertising manager of the Robert-Brown Company, owners and operators of large iron mines in the Lake Superior region, and under whose direction this series of pictures was taken. He said that the firm had produced them simply for advertising purposes, but very soon realized their great educational value and to make them more complete decided to add the series illustrating the manufacture of steel, in which they were not directly interested.

Mr. Yergasson mentioned briefly the enormous increase in iron and steel production in this country, which now leads the world in this respect, and stated that during the last forty years more steel has been produced than in the whole previous history of mankind. Two-thirds of the sixty million tons of ore mined in the United States in a year comes from the Lake Superior district, which contains some of the largest and most remarkable mines in the world. As the mining of the ore is what might be called the fundamental process in steel manufacturing and since very few people are acquainted with the modern methods now in use, Mr. Yergasson described them in some detail.

The ore near the head of Lake Superior occurs in the form of immense deposits covered over with a layer of clay and ordinary soil. The first pictures showed this upper layer being stripped off with steam shovels, and the mining of the ore at the bottom of the pits by the same means in the Mahony and Hull Rust mines, near Hibbing, Minnesota. These great shovels can scoop up and load into cars from seven to eight tons of ore every half-minute—so different from the slow process of underground mining in use only a few years ago. As illustrating the magnitude of the work, pictures were shown of the Susehanna mine, where in the last two and a half years a layer of the overlying clay one hundred and fifty feet in depth has been removed and transported two miles to the dumping grounds at a cost of almost two million dollars. The grades out of most of the mines are so steep that two engines are necessary to haul out a five-car train containing 250 tons of ore. These short trains are then made up into longer ones and taken over the Duluth, Masabe and Northern Railroad to the docks at Duluth and other lake ports. The railroad has for this purpose several Mallet compound engines, each weighing 361 tons, and capable of hauling trains of 125 empty ore cars over steep grades to the mines.

Pictures were then shown of the Masabe docks, which are typical installations of their kind. They are about a half mile long and are made up of ore pockets, each with a capacity of 250 tons, and two tracks running over them so that 100 tons more can be dumped from cars while a
(Continued on Page 2.)

MANY CANDIDATES AT TECH SHOW MEETING

Many Girls Are Needed For the Cast—Manager Fiske Outlines New Features.

The meeting of candidates for the cast and chorus of Tech Show, held Saturday afternoon, was well attended. The men were received by Manager Fiske, who proceeded to make them an address on the subject of the policies to be pursued by the Show this year, the opportunities in the various departments, the trips to be taken, and similar information.

E. Menderson, the co-author of this year's show, then spoke concerning the various characters required by the play and the requirements of each. It seems that there is especial opportunity this year in the way of female roles, so that those who can impersonate the fair sex will be in great demand.

A new policy will be pursued by the Show in the electrical affairs connected with the presentation. There will be an electrical manager, and twelve to fourteen assistants each year the manager of each succeeding year being selected from among the assistants of the previous year. The assistants will be selected from the most capable electrical men who come out for the position.

JUNIOR BASKETBALL.

Team Loses to Brockton Y. M. C. A. by Score of 34 to 23.

The Junior basketball team was defeated by the Brockton Y. M. C. A. Saturday evening, at Brockton. Owing to the difference in the rules under which the teams were accustomed to play, one-half was played under amateur rules and the other under college rules. Tirrell did well for the Juniors, while Pitcher excelled for Brockton.

The summary:
Brockton Y. M. C. A. Tech Juniors.
Reardon, I. F. I. b. Bryant
Lawson, I. F. I. b. Duff
Pitcher, C. I. c. Ruoff, Fox
Freedman, F. I. f. Comber
Sheehan, I. b. I. f. Tirrell
Score—Brockton Y. M. C. A., 34;
Tech Juniors, 23.

Goals from floor—Pitcher 5, Lawson 1, Sheehan 4, Reardon 2, Roach 2, Tirrell 4, Comber 2, Duff Bryant.

Goals from fouls—Sheehan 2, Tirrell 7.

Reteree—Davis.
Scorer—Cote.
Timer—O'Brien.
Time—20-minute periods.

RELAY TEAM TRIALS.

Saturday afternoon, in the Gym Coach Kanaly held some of the trials for the two-mile team which will run against Harvard at Providence. Owing to the fact that several men were unable to take trials on Saturday, the results of the trials will not be announced until Monday.

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FRESHMAN TRACK TEAM LOSES TO LOWELL HIGH

Are Defeated by Score of 46 to 32—Adams and Benson Excelled for Freshmen.

In its first meet of the season, on Saturday evening, the Freshman track team met defeat at the hands of the Lowell High School team, at Lowell. Until the last few events the score was very close, the lead varying from Tech to Lowell, and vice versa, with almost every event. Although defeated, the Freshmen put up a good fight in almost every event, and with the experience gained from this meet should have no difficulty in winning the future meets.

In the 30-yard dash, which was the first event, both Adams and Loomis won their heats, while in the other two heats Petit and Hine took second places. In the semi-final heats, Adams and Loomis once more were in first places, but were nosed out in the final heat by Libby of Lowell. This heat was very close, and was won by only a few inches. In the 100-yard run, Guething, for the Freshmen, took the lead at the start, and set a fast pace, but was passed by Bowers of Lowell in the eighth lap. However, the sprint of the latter was short-lived, and Guething took the lead on the next lap, holding it to the finish. The high jump resulted in a triple tie between Garita of the Freshmen, and Chase and Dutton of Lowell, at five feet five inches. The points were divided as a lack of time prevented the men from jumping off the tie.

Adams took the lead at the crack of the pistol in the 300-yard dash, and hit up an extremely fast pace, never once being in danger. He finished easily in the last time of 39 seconds. Pailey and Haggerty of Lowell annexed second and third places, respectively, after a hard fight with Hine and Comiskey. Dean drew the pole in the 800-yard run, but owing to an unfortunate fall at the first corner lost about twenty-five yards. Northing, daunted by his mishap, he immediately set sail after Spaulding of Lowell, who had the lead, and soon jumped into second place. However, the strain was too much for him and he finished about a yard behind, closely followed by Reed of the Freshmen.

Lowell clearly outclassed the Freshmen in the shot-put, and walked away with all three places. The Freshman entrants seemed to have trouble in keeping within the circle. Both Adams and Loomis reached the finals of the thirty-five yard hurdles, but although Adams easily won the event, Loomis lost third place by a scant foot.

Benson easily won the mile run by nearly a lap over Bowers of Lowell, who was his nearest competitor. White put up a good race and won third place. The last event was the 1500-yard team race, which was the most exciting of the evening. Adams gave Loomis of the Freshmen a good
(Continued on Page 3.)

CALENDAR.

Monday, February 17, 1913.
4.00—Tech English Class—16 Rogers.

Tuesday, February 18, 1913.
1.30—Meeting of Athletic Board of THE TECH—Union.
4.00—Chess Club Meeting—Union.

THE TECH

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MONDAY, FEBRUARY 17, 1913

"HAIL TO THE WRESTLERS!"

The Institute has at last awakened with a somewhat shocking suddenness to the fact that it has produced a first-class wrestling team. Many were aware that a few fellows had formed a team which had met with some success, and that it was known that the Freshmen were taking more or less interest in the game; but that we were possessed of a team which, with one of its best men temporarily disabled and another still weak from recent injuries, could compete so well with a strong team such as Harvard's, had unfortunately entered the heads of but few men.

It is to be noted that the wrestling team has not grown up over night. A few men have been working for three or four years, quietly and unostentatiously toward the end which has come about. They believed in wrestling and they worked for it in the face of difficulty and discouragement and defeat, until now, just at the time when the gymnasium and the basketball teams are dead, and when some strong stimulus is needed to awaken athletic interest, their efforts are bearing fruit. We cannot but feel that the wrestling team is a product of the best and truest sort of Tech spirit—the spirit that works hard and long and thoroughly when there is no approving crowd to cheer it on.

We feel that the whole student body will join with us in extending to Captain Treat and to the men who have so well supported him the heartiest of congratulations. We realize that the team has fought its way to the front by clean and persistent endeavor, and we are confident that the future will bring to it, in reward for its perseverance, all of the success and all of the honor which it so richly deserves.

NOTICE.

The French Club will hold a special meeting this afternoon in 29 Lowell, to act upon a constitution which Prof. Vogel has found which belonged to a former similar organization. Other important matters will also be acted upon.

SOPHS WIN FROM FORT WARREN FIVE

Defeat Team in Handy Fashion—
Series With Freshmen
Coming.

In the fifth game of the season the Sophomore basketball team defeated the Fort Warren five last night on the latter's floor. Although outweighed, man for man, the second-year men outplayed their opponents, ending up with a score of 15 to 10 in their favor. Scully, Morse and Neuman each played a star game for the Sophs. All the men played a strong, aggressive game, and at no time was the outcome of the game in doubt. The following five men made the trip: Morse (Capt.), Scully, Neuman, Colby and Wilson.

Next Wednesday night the first of a series of three games will be played in the Gym between the Sophomores and Freshmen. The Sophs have won three out of five games played, and have been showing slightly better team work than the Freshmen. The same night the Juniors will also play Brockton in the Gym. The price of admission for the two games will be only twenty-five cents—a good chance to see a "double-header" at a low price.

CIVIL MEETING.

(Continued from Page 1.)

vessel is loading. By this means almost incredible records have been made at these and other docks similarly constructed. The record is now held by the Escanaba docks, belonging to the Chicago, Milwaukee and St. Paul, where 10,600 tons were loaded in ten minutes, and the total time of the vessel at the docks was only 28 minutes. Since the shipping season on the lakes is so short every facility is provided for quick loading and unloading, and it is the common practice to remove the covers to the thirty or more hatches in transit so time will not be wasted while at the docks. The largest vessel in use at present is the "Schoolmaker," with a capacity of 13,000 tons.

The Masabe docks are provided with the largest fireboat in the world, exceeding even the famous "New Yorker" in capacity. Some very interesting pictures were shown of the fireboat as she would appear when in action.

The next reel of films portrayed various points of interest on the trip down the lakes to Buffalo, where the furnaces and steel mills are situated. The Soo Sault St. Marie canal and locks are the most important of these. There is one lock on the Canadian side and two on the American side, with a third American lock under construction. Their method of operation is the same as that to be used at Panama, but, of course, on a much smaller scale, and it takes about ten minutes to empty or fill one chamber. The U. S. Government has aided the shipper in every possible way, and sends out advance reports of the depth of water in the locks so that the boats may be loaded to the maximum draft. At one time, as a result of these reports, a master was able to take on 600 tons more and passed over the sills of the lock with less than an inch and a half to spare.

The next important process is the unloading, which takes four hours or over. Two general types of unloading machines are used—the traveling bridge cranes with grab buckets of about eight tons capacity, and the Hewitt unloader. The latter is rather unusual in its appearance and operation. To one end of a long rocking arm is attached a vertical leg which is constrained to move parallel to itself by a pantograph mechanism. In the lower end of this leg is the operator's cage, below which are two scoops, arranged much like the ordinary clam-shell bucket. The whole runs on ways both perpendicular and parallel to the front of the dock. The capa-

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CIVIL MEETING.

(Continued from Page 2.)

city of the Hewitt unloader is about fourteen tons, and it is almost as flexible as the human hand and arm.

From the boats the ore is loaded into electric distributing cars running along the rear of the furnaces and discharging their loads into hoppers, which in turn discharge into the skip hoist running to the top of the furnace. These furnaces are immense affairs, and each takes 6000 tons per day, so large storage yards must be provided from which to draw during the winter months. The furnaces are sometimes kept running for six or seven years at a time.

From a chemical analysis of each shipload the proper preparations for the blast furnace charge is determined and the materials are dumped into the skip hoist from distributing cars similar to the ones handling the ore. In the furnace the ore is melted and the "tears" of iron trickle down through the mass to the bottom, where they accumulate with a layer of slag just above. The slag, which used to be wasted, is now run into pits, where streams of water play on it and cause it to crystalize so that it may be broken up more easily for manufacturing fertilizer. The iron is tapped off every four hours and cast into pigs, which are then taken to a hydraulic breaker and broken in half.

The latest method of casting pigs is by pouring from ladle cars into a series of slowly moving molds. The mechanism is so arranged that there can be no overflow and the process is practically continuous. The molds pass into tanks of water and finally dump the pigs into cars. Another great improvement in the later handling of pig iron is the use of the electro-magnetic crane which can easily do the work of twenty-five men.

After all these processes had been illustrated the films showing the manufacture of Bessemer steel were thrown on the screen. This series was by far the most spectacular, as anyone who has witnessed the blowing of a Bessemer converter may well imagine. In the taking of these pictures no expense or trouble was spared, and in several instances special arc lamps, aggregating over 4000 candle power, were installed to light the large buildings.

The pigs from the blast furnace are remelted and run into the large egg-shaped vessel known as the Bessemer converter. After a blast of air has been blown through the molten iron for about twenty minutes all the carbon and most of the other impurities have been burned out and the correct amount of spiegeleisen is added to bring the carbon content up to the desired point. The steel is then run into a casting ladle which swings around a vertical mast and discharges into ingot molds on small cars. When the ingots have slightly cooled the molds are stripped off with a special machine and the ingot themselves carried to "soaking pits," where they become more homogeneously heated, ready for rolling.

The rolling is first done by reversing rolls, through which the ingots pass in alternate directions, and at the same time the rolls approach each other. The final finishing of the rails or other forms is done in what are called three-high continuous mills. The steel is passed through a series of openings between the rolls—first under and then over the middle roll—and is thus gradually reduced to the finished form. Rails when they emerge from the last mill are about 150 feet long and are sawed into thirty-three foot lengths with a circular hot saw. Every so often four-inch samples are cut out for analysis, and four-foot samples for the breaking test which the railroads require. Besides the frequent analysis of the iron and steel during the process of manufacture each ingot and rail is given a distinctive number, and the finished rails are also stamped with the date

(Continued on Page 4.)

**REV. H. W. STEBBINS
NEXT T. C. A. SPEAKER**

Chaplain of State Prison to
Speak on Interesting
Subject.

For next Thursday's speaker the T. C. A. has been fortunate in securing the Rev. Herbert W. Stebbins, chaplain of the State prison in Charlestown. His talk last year was well received and proved of interest to all because of the varied experience of the speaker. As a result of his visit to Technology last year the Glee Club offered its services to entertain the prisoners confined at Charlestown.

He will speak this year on the subject, "Why Men Come to Jail." He is a man who sees in the convict, not a hopeless criminal, but a man who at the deciding moment failed, and needs a lift. In the years that he has acted as chaplain he has worked with that principle constantly in mind, and the classes that he conducts in the prison for men, to teach them something that will be of use to them when they are again free, are monuments of his good work.

The fact that he has met so many men who have failed in perhaps every run of life makes him a man able to give advice to college men who are about to start out in a new life.

FRESHMAN MEET.

(Continued from Page 1.)

lead, but the latter was unable to increase it, and touched off Comiskey with a two-yard lead. Comiskey fell on the second corner, but as his opponent fell over him, the relative position of the contestants was unchanged. Reed and Bailey started almost even, but the Lowell runner elbowed his way into the lead and could not be ousted, winning by a few feet.

The summary:
30-yard dash, first heat—1st, Adams, Tech; 2nd, Bailey, Lowell. Time, 3 4-5 seconds. Second heat, 1st, Haggerty, Lowell; 2nd, Petit, Tech. Time, 3 4-5 seconds. Third heat, 1st, Libby, Lowell; 2nd, Hine, Tech. Time, 3 4-5 seconds. Fourth heat, 1st, Loomis, Tech; 2nd, Trull, Lowell. Time, 3 4-5 seconds. First semi-final heat, 1st, Adams, Tech; 2nd, Carter, Lowell. Time, 4 seconds. Second semi-final heat, 1st, Loomis, Tech; 2nd, Libby, Lowell. Time, 4 seconds. Final heat, 1st, Libby, Lowell; 2nd, Adams, Tech; 3rd, Loomis, Tech. Time, 3 4-5 seconds.

1000-yard run—1st, Guething, Tech; 2nd, Bowers, Lowell; 3rd, Safford, Lowell. Time, 2 minutes, 40 4-5 seconds.

300-yard dash—1st, Adams, Tech; 2nd, Bailey, Lowell; 3rd, Haggerty, Lowell. Time, 39 seconds.

600-yard run—1st, Spaulding, Lowell; 2nd, Dean, Tech; 3rd, Reed, Tech. Time, 1 minute, 33 seconds.

35-yard hurdles—1st, Adams, Tech; 2nd, Carter, Lowell; 3rd, Bailey, Lowell. Time, 5 seconds.

Mile run—1st, Benson, Tech; 2nd, Bowers, Lowell; 3rd, White, Tech. Time, 5 minutes, 7 seconds.

High jump—1st, Garita, Tech, and Chase and Dutton, Lowell, tie. Height, 5 feet, 5 inches.

Shot-put—1st, Cawley, Lowell; 2nd, Sturtevant, Lowell; 3rd, Gill, Lowell. Distance, 46 feet, 7 1/2 inches.

1200-yard team race—1st, Lowell (Haggerty, Carter, Trull, Bailey); 2nd, Tech (Adams, Loomis, Comiskey, Reed).

Referee—Mr. Burtt.
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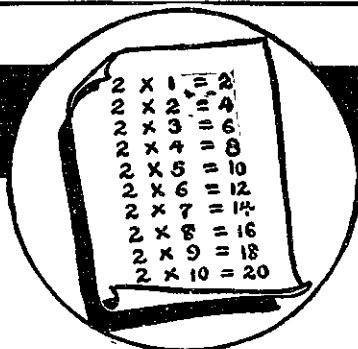
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DEPT. OF ENGLISH.

(Continued from Page 3,
on which it was rolled and the operator who passed it. This finishes the progress of the iron from mine to rail. The kindness of the Robert-Brown Company and their representative, Mr. Yergasson, was greatly appreciated and the pictures gave the Institute men some valuable information as well as a very pleasant entertainment.

"DEKES" DINNER.

Many Present at Annual Banquet in City Club.

The annual dinner of the Boston Alumni Association of the Delta Kappa Epsilon fraternity was held at 8.30 on February 14, at the Boston City Club. Over 250 men were present, and large delegations were there from Technology and Brown, and smaller delegations from the other New England colleges.

Among the principal speakers were Richard T. Greene, an eminent New York lawyer, who comes over to represent the national council of the fraternity, and Samuel L. Powers, Dartmouth, '74 of this city. The toastmaster was the president of the association, Elmer E. Silver, Brown, '33.

The 67th annual convention of Delta Kappa Epsilon will be held in Boston next December.

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