

THE TECH

VOL. XXXIII. NO. 125

BOSTON, MASS., MONDAY, FEBRUARY 9, 1914.

PRICE TWO CENTS.

TECHNOLOGY MONTHLY TO APPEAR SOON.

Meeting of Candidates Tuesday at 4.30
In the Lower Tech Office.

When interviewed yesterday the publicity manager of the new Technology Monthly gave out the following statement:

"Work on the New Monthly has progressed to such an extent that publication is now practically assured; but in order that the magazine shall be a complete success, more men will have to interest themselves in the business and editorial departments. The management wishes to emphasize the facts that positions on the boards are open to all men of the Institute and that inexperience does not bar a man from the competition. At least fifty men should report at the next meeting."

Tuesday, tomorrow, afternoon at 4.30 a meeting will be held in the lower office of THE TECH. The acting heads of the various departments will be present to give any information to the candidates that they may desire. All men interested in the magazine should be present at this meeting.

When the first issue appears in March, it will contain articles by prominent Institute men and men prominent in other colleges. Special departments will be devoted to Athletics, Engineering and Humor. The first issue will contain as an added feature, a short story written by a professional story writer. Half-tones and plate reproductions will complete the table of contents.

Although the regular subscription price is \$1.50 per year of eight numbers, or 25 cents a single copy, arrangements have been made whereby half year subscriptions will be offered for 75 cents to accommodate those who wish to get the first four issues only.

FIRE AT TECH

Trinity Place the Scene of Great
Bravery.

At five o'clock last Thursday afternoon seven pieces of the Boston Fire Department came tearing around the corner of Trinity Place and stopped before the door of Engineering C. Two Department chiefs led the brave firemen into the building with fire extinguishers and axes, a strong smell of smoke assailed their nostrils and they rushed on bellowing madly, "Where's the fire?" Door after door was opened but the blaze could not be found. It was suggested that someone was smoking a Union cigar but this clue proved fruitless. By this time two police vans loaded with officers had appeared, and a large crowd gathered outside the door.

After fifteen minutes of useless hunting someone suggested the roof. The Fire Department made its way up there and the mystery was solved, the insulation on the intake motor was burning. This fire was the first to be rung in from the new box at the corner of Stanhope street and Trinity place.

ELECTRICAL ENGINEER'S MID-YEAR TRIP

Course VI. Men Make Interesting
Tour Through Electrical Plants.

During the midyear vacation thirty members of the Electrical Engineering Society, accompanied by Professor W. H. Thompson, Mr. R. G. Hudson and Mr. John Ritchie, Jr., visited the important electrical plants in New York and New Jersey.

Upon arriving in New York on Monday morning, Feb. 2d, the party was immediately transferred to the Hotel



H. L. RICHMOND,
President of E. E. Society.

Bristol where excellent accommodations awaited them. After the details of room assignments were attended to, the first excursion was started which was to the General Electric Lamp Works in Harrison, New Jersey. The men were taken through the entire plant and the details of the manufacture of the lamps were explained. After the trip the men were the guests of the General Electric Company at an excellent luncheon.

At 1.45 the party returned to New York and went to the laboratories of the Western Electric Company on West street, where there were several M. I. T. graduates to greet them. The trip through the laboratories gave the men an opportunity for seeing of what a mass of detail telephone research consists. There were, for example, groups of boys whose only duty, week in and week out, is to press keys and switches to see how long it will take to wear them out. The testing of the transmitters and receivers was also very interesting.

Leaving this plant at 4.30, the party then went to the Hotel Astor where the men were taken on a three hours' personally conducted tour through the entire building from the power plant in the third sub-basement to the roof garden. The lighting system was very effective especially in the ball room where it was as elaborate as that of many theatres. The fire alarm system is unique and there is only one

(Continued on Page 4)

ANOTHER GIFT FOR ELECTRICAL RESEARCH

R. H. Macy and Co. of New York,
The Donors—Observations Will
Be Made in New York.

Following Theodore N. Vail's repeated expression that business firms do well to endow scientific research, a prominent New York department store, R. H. Macy & Company, has contributed largely for an investigation to be conducted by the Massachusetts Institute of Technology. The object of the investigation will be the determination of the general economic laws underlying the operation of the delivery service of a large retail department store. The study will be conducted by Technology's Electrical Research Division, and the observations will be made upon the delivery system of the Macy store.

There are few who realize that the delivery department of a store as large as Macy's constitutes in itself a business enterprise of large proportions. One can better understand this when he considers that in New York the goods purchased at 35th street are distributed, without charge to the customer, everywhere between Stamford, Conn., and Seabright, N. J., or over an area nearly equal to about one-third of Massachusetts. To provide for quick deliveries throughout such a large area, there has grown up a system of operating depots in the several delivery zones. Packages are transferred in large vans from the store to the depots, whence they are distributed to the customers. In case of the Macy Company, this system means the employment of approximately 400 vehicles including horse, electric and gasoline wagons with the attendant small army of men. The total expense of the company's delivery system is upwards of a million dollars a year.

A saving of one-tenth of a cent on each delivery means much in a system of this size. Armed with the experience that the Research Division has already gained in its study of motor trucking in Boston and other cities, a special staff of Research Assistants is to study the methods employed at the store to determine the character of the deliveries, the zones and distances, the speeds, loading, running and standing times of the wagons, etc. Special attention will be paid to the expense caused by the delay of the delivery wagons in congested traffic, in waiting for ferries, and in making individual deliveries to the several suites in apartment houses; for it is not customary in New York for the office of an apartment building to receive goods for the tenants.

The study of New York delivery conditions is to be begun early in February and will require a staff of three men to complete the survey by midsummer. One of the considerations involved in undertaking the study is that the work will be pushed with all proper speed.

The first of the studies of the Research Division upon the operation of delivery vehicles was undertaken at the initiation and support of President Edgar of the Edison Electric Illumi-

(Continued on page 3.)

TWO RECORDS BROKEN IN B. A. A. MEET

Technology Wins from Dartmouth by
Very Close Time Saturday Night.

Two new world records in the 1500 yard relay, a new track record in the three miles and fast and close races made the B. A. A. meet held in the Mechanics Building last Saturday night one of the best meets ever held by the Unicorn club. One of the closest and most exciting races of the evening was the relay between the Institute team and Dartmouth. At the crack of the starter's gun, Frank O'Hara '17, who had drawn the pole, set off like a forty yard dash and at the end of the three laps turned the race over to K. Dean '16, five yards ahead of his man. G. A. Braun, who followed A. S. Llewellyn set out after Dean and at the touch-off they were running neck and neck. Dean started off C. Fox '14 and Braun touched off to C. W. O'Connor. Fox stuck to his man until the last lap when O'Connor let loose a sprint that brought him to the finish line a half ahead of Fox. C. W. Olson started enough ahead of Captain T. H. Guething '14, to give the Dartmouth team big odds, but Guething gradually pulled down the lead and at the end of a lap and a half was pushing Olson hard on every corner. Quarter way around the last lap the Tech Captain took away the pole on the inside as he had been trying to do for the entire distance and brought the crowd to their feet by sprinting into a five yard lead which he held to the tape. The race was run in three minutes, ten and four-fifths seconds, the B. A. A. vs. N. Y. A. C., Harvard vs. Cornell and Holy Cross vs. Georgetown relays being the only races run in faster time.

F. O'Hara placed in the semi-finals of the forty yard dash but was used up in the relay. T. H. Huff '14, and K. H. Day '17, got as far as the semi-finals in the hurdles. A. A. Cook '15, showed up well in the three mile run, being one of the four to finish. This race was run in 14 minutes, 43 and two-fifths seconds, a new track record.

Records were made in the relays between Harvard and Cornell, run in three minutes, six and one-fifth seconds, which mark was bettered by the B. A. A. running against the N. Y. A. C. Halpin crossed the line fifty yards ahead of his man in three minutes five and three-fifths seconds. Carl Gram '09, ran on the world record breaking team.

PROM COMMITTEE MEETS

There will be an important meeting of the Prom Committee this afternoon at five o'clock in the Union. It is necessary that every man be there.

CALENDAR

Monday, Feb. 9, 1914.

5.00—Junior Prom. Committee. Union.

Tuesday, Feb. 10, 1914.

4.30—TECH MONTHLY Board. Union.

THE TECH

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MONDAY, FEBRUARY 9, 1914.

IN CHARGE OF THIS ISSUE

Editor—H. W. Anderson '15.
Assistant—J. M. DeBell '17.

How did you come out?

Have you been flattering yourself for the last term?

The E. E. Society trip is indeed an inspiration and a practice which should be given every chance for development. The opportunity which such an excursion offers, is necessary to every one. He gets new ideas, sees new people, and above all gets out of the rut he has been working in possibly, a thing absolutely essential to us all.

The Tech is again in need of men for all departments. There are excellent chances for any who can interest himself in the work of getting out a newspaper. There is surely no more instructive pleasure. It is very broad and its various departments make it possible for a man to suit his tastes in selecting which one he shall go into.

Candidates for all departments will meet on Wednesday afternoon at five o'clock in the lower office. Any who care to come out before will find the various managers in the upper office from five-thirty to six any afternoon.

With the opening of the second term those of us who have failed are making new resolutions, those of us who have passed are patting ourselves on our backs and saying things weren't so hard after all, or wondering how in the world we were able to do it. We are all human, but how good it would be if we could be just a bit more humanely human, not only to others but to ourselves. Many of

us get so filled with the speed mania which is so evident in present day living that we never take the opportunity to look into our very innermost consciousness unless we are suddenly compelled to do so by some such occasion as this.

Would it not be a wonderful state of affairs if we could become philosophic observers of our faults?

BOSTON OPERA COMPANY PRESENTS "CARMEN"

This Week Will Be One of Most Important in Season—"Love of Three Kings."

The importance of the forthcoming week, the twelfth of the Boston Opera season, will speak for itself. One important new opera will be brought to its first performance, three old favorites will be restored to the current repertoire, and one work which has met with especial favor this winter will be repeated.

On Monday, Feb. 9, the new work, "The Love of the Three Kings" will be given its Boston premiere. This is the work which has recently been pronounced in New York as one of the most important new operas that has ever been performed there. It is also the work which was the vehicle of Mr. Ferrari-Fontana's triumphal first appearance in New York. The cast which will be heard at the Boston Opera production will be the same, in all important essentials, as the Metropolitan cast. It will include Miss Lucrezia Bori as Fiora, Pasquale Amato a Manfredo; Edoardo Ferrari-Fontana as Avito; and Paolo Budikar as Archibaldo; with Mr. Moranzoni directing.

The play which served almost verbatim for the libretto of this opera was written by Sem Benelli, one of the foremost of the Italian dramatists and poets of the day. It was a successful drama before Italo Montemezzi turned it into an opera, and it has lost none of its dramatic values in the process. Of the music, it has been hailed by some critics as the rehabilitation of Italian opera; while even the more conservative critics have praised it enthusiastically.

Wednesday night will be the occasion of the season's first production of the ever-popular "Carmen," with a notable cast. Margarita D'Alvarez will sing the title role, with that fire and spirit those who have heard her can imagine. The Don Jose will be Lucien Muratore, who returns from Chicago, crowned with fresh laurels, to round out his Boston season. Mr. Andre-Caplet will conduct. With such a cast a remarkable performance of the Bizet work is assured.

On Friday night "The Secret of Suzanne" will come to its first performance of the year, coupled with "Pagliacci." Miss Alice Nielson will, of course, be the countess in the delightful Wolf-Ferrari piece; and Antonio Scotti will come from the Metropolitan to take the role of the count. The Leoncavallo opera will be repeated with the same cast which has brought it into such great favor earlier in the season. Miss Nielsen will be the Nedda, a winsome and most pathetic figure; Mr. Ferrari-Fontana will repeat his marvelously stirring characterization of Canio; and Mr. Ancona will be the Tonio, a role in which he excels. Mr. Moranzoni will direct.

At the Saturday matinee "The Love of the Three Kings" will be given its second hearing, with the same cast as before. A large attendance is assured; as the work has aroused widespread interest, and many who cannot attend the evening performances will

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avail themselves of this opportunity to hear the opera.

At the Saturday evening performance at popular prices, Flotow's "Martha" will be sung in English, for the first time this season. The principal roles will fall to Evelyn Scotney, Elvira Leveroni, George Everett, Alfredo Ramella, and Howard White. Mr. Lyford will direct. An opportunity to hear an opera in English does not often come, and it is certain that a large number of people will eagerly take advantage of this one.

At the eleventh operatic concert, to be given in the Boston Opera House the evening of Sunday, Feb. 8, the great violinist, Ysaye, will be the principal feature. The orchestra will perform a number of operatic selections, and will accompany Mr. Ysaye in several concertos which he will play.

DR. JAGGAR ON THE WAY TO JAPAN ERUPTION.

Much Earlier Than Many Other Scientists.

Although quite a little has been said about specialists from various countries rushing to Japan to observe the phenomena of the eruption on Sakura Island, the Massachusetts Institute of Technology will have its man on the ground first. President MacLaurin has been in communication with Dr. T. A. Jaggar, stationed in Hawaii, and he is already well on his way to Japan, some thousands of miles ahead of the European volcanologists who are to congregate there.

Dr. Jaggar has been exceedingly active in his observation of volcanic phenomena. He was early at Mount Pelee in the Antilles, where most valuable studies were made, and his work on Bogosof in Alaska, an island that changes form while you wait almost, have been the foundation of the study of the great earth movement in these northern seas. Then Dr. Jaggar spent a season in the Hawaiian

Islands and a year or two later, having secured the financial foundation, there was established the Technology Observatory Station at Kilauea, to which he has been appointed director.

Business seems to be dull at Kilauea or else the Technology influence has affected the volcano. At all events at the present time the lake and other manifestations at Hawaii are quiescent and Dr. Jaggar takes the opportunity to slip away and catch the Japanese eruption in its later phases.

The Japanese are themselves close students of volcanic phenomena and to the credit of the country is the devising of some forms of instruments for recording earth shakes and tremors.

Sakura is a little island well within the long bay that runs north in the southern part of the great island of Sakiado, and the nearest district that will have a familiar sound to foreigners is Satsuma, from which the rare and valuable ceramics take their name.

FRESHMAN TO ANNAPOLIS.

Forrest T. Sherman, '17, has been appointed to a Cadetship at the U. S. Naval Academy at Annapolis by Congressman F. S. Dietrich. He was a graduate of Melrose High School in the class of 1913.

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COMMUNICATION.

To the Editor of The Tech:

Dear Sir: President Lowell of Harvard is reported to have said in his after-dinner talk before the members of the Harvard Club of New York, at their annual dinner on the evening of January 30th, "Something must be said about the Harvard conception of a school of engineering, particularly adapted to college graduates, and the danger of its disappearance in the co-operation. No doubt our Graduate School of Applied Science was based on the belief that graduates of colleges, who have mastered their mathematics, physics and chemistry, require a somewhat different course from boys who study engineering immediately after leaving the High school. But it must be observed that among engineering schools the Institute of Technology gives a peculiar amount of attention to general subjects outside the ranges of technical studies; and we must also remember that the college graduates there have increased rapidly of late years now outnumbering those in our school. The Institute is as anxious as we are to encourage them, and give them the education best suited to their capacity. The number of such graduates after the co-operation will certainly be large enough to be dealt with as a group, if that be wise, and it would not require much change in the four year programme of the Institute to adapt the third and fourth years or a part of the courses therein, more completely to men who have been through a college. This matter may be safely left in the hands of the faculty, where our professors will exert an influence in proportion to the soundness of their opinions."

To just what extent is this in harmony with the statement made in Huntington Hall that the Harvard engineering schools had ceased to exist? How can an institution which has ceased to exist exert an influence the purpose of which is to destroy the very foundations upon which a great educational institution is built. Under the title of "General Information" in our catalog it says, "In this Memorial reference is made to the expected early establishment of a comprehensive Polytechnic College, furnishing a complete system of industrial education supplementary to the general training of other institution, and fitted to equip its students with every scientific and technical principle applicable to the industrial pursuits of the age." To the knowledge of the average student the idea expressed above, and in fact the idea connected with all the works of William Barton Rogers, means only one thing, an institution founded to provide an all round education, an institution to develop that ideal man of Huxley who could forge the anchors as well as spin the gossamers of the mind. Technology has been built upon this idea and so far as the student is aware his whole training here is to that end. Why, then, I ask, should an institution which no longer exists even attempt to advance the idea that the whole basic principle of Tech should and could so easily be done away with that the ideals of said defunct institution should be continued? By mayhap we are no longer to hold to those wonderful ideas which the great mind of William Barton Rogers brought forth and put into practice. Were we not told from Huntington Hall platform that, "As William Barton Rogers was the founder of old Technology, so Mr. Smith was the

founder of new Technology?" May I ask if the whole source of the general misunderstanding about this co-operation does not lie in the fact the loyal Tech student and alumnus has not yet waked up to the fact that perhaps the traditions and ideals of old Technology were sold for two million, five hundred thousand dollars, and that with the consent of this mysterious Mr. Smith for the consideration of one-tenth of our present income the Harvard professors are to set the pace for New Technoooy exerting "an influence in proportion to the soundness of their opinions."

Yours truly,
AN UNDERGRAD.

ANOTHER GIFT FOR ELECTRICAL RESEARCH
(Continued from Page 1)

nating Company of Boston. A paper giving the final results of this investigation will be delivered on the invitation of the Electric Vehicle Association of America at the association's meeting in New York on February 17th.

CLARK TELESCOPE FOR MARS.

Dispatches from Dr. Percival Lowell at his observatory at Flagstac, Ariz., announce that he is using the forty-inch Clark reflecting telescope on Mars with full aperture. The definition he declares to be perfect, the canals being sharp lines. This disposes of the notion that large apertures are inefficient in showing the markings, and during the present opposition important additions to the knowledge of the planetary markings are probable.

LOST ARTICLES.

Jan. 23, 1914.

Articles enumerated below have been found. Owners of same may obtain them at the Office of the Supt. of Bldgs. & Power, 26 Trinity Place.

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- 1—gray fur-lined glove
- 1—brown glove
- 1—slide rule
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- 1—Geometry book.

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TODAY, 8 to 10.40; first time in Boston. **THE LOVE OF THE THREE KINGS** (L'Amore dei Tre Re). Lucrezia Bori, Ferrari-Fontana, Amato, Ludikar. Cond., Moranzoni.

WEDNESDAY, 8 to 11.25, **CARMEN**. D'Alvarez, Nielsen, Muratore, Mardones. Cond., Andre-Caplet.

FRIDAY, 8 to 10.40, **SECRET OF SUZANNE**. Nielsen, Scott, Tavecchia. Cond., Andre-Caplet. Followed by **PAGLIACCI**. Nielsen, Ferrari-Fontana, Ancona, Everett. Cond., Moranzoni.

SATURDAY, 2 to 4.30, **THE LOVE OF THE THREE KINGS**. Same cast as Monday.

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(Continued from Page 1)

other hotel in the country which has such a system. The fellows were deeply interested in it and to show the efficiency of the department and system, Mr. Green of the hotel who was exceedingly generous, suddenly turned around as he was passing one of the fire boxes and told the men to stand back against the wall. He then broke the glass in the box and 40 seconds later the hotel fire department, equipped with ladders, extinguishers, axes and the other fire-fighting implements, rushed from an elevator at the end of the corridor. After the inspection of the hotel was concluded, the party officially broke up for the night although many of them ate a hasty dinner and adjourned to the Hippodrome.

Tuesday morning the first trip took them to the sub-station of the Pennsylvania R. R. at the new terminal. From here the party was taken through the maze of passages of the station itself and tramped several miles through underground passages, when they came to the baggage room, boarded two auto baggage trucks and were taken around the baggage room in perfect comfort. This part of the excursion was concluded by a half mile race between the two trucks. The representatives of the railroad then took the party onto a special car and carried them under the East River to Long Island. Here the power station and electric locomotives were inspected. When the return was made the railroad again provided a special car.

The afternoon was spent at the Edison Waterside station which is the power plant that supplies New York City. The completion of the inspection concluded the program for the day although several supplemented it by a trip to the Winter Garden.

"Factory Methods" was the object of Wednesday's visits. The morning was consumed by a trip to the Crocker-Wheeler Co. at Ampere, N. J., where the construction of electric machinery was studied. The working conditions seemed very good although some of the methods of manufacture were rather antiquated. Without returning to New York the party went to Orange, N. J., after completing the morning inspection, where the laboratories and factory of the Edison Storage Battery Company were inspected. The process of manufacture of this new type of cell proved a great attraction for the fellows and they picked up many things of importance during the trip. At 4.30 the party returned to the hotel in New York and at 8.30 left on a special car attached to the Philadelphia express, arriving at Green's Hotel in Philadelphia at about 11.00 p. m. There was great excitement on the train when a letter from the Philadelphia Alumni was read inviting Prof. Hudson, Thompson, Mr. Bristol, John Ritchie, Jr., and the students to be the guests at an alumni dinner the next evening.

Thursday morning the party went to the Brill Car Company's works and here the whole process of manufacture from the ingots to the finished cars was seen and the process of making the large parts by drop forging was especially interesting. Several of the cars were going to Lisbon, Portugal—these were of an odd construction. There was also a type which competed closely with that of the Boston "snake-cars" for eccentricity.

In the afternoon the plant of the Baldwin Locomotive Company was inspected, previous to which Mr. Johnson, President of the company, gave a very instructive talk. This company employs about 18,000 men.

In the evening the students were the guests of the Alumni at a banquet held in the Hotel Walton. at which Richard Waterman, '92, was toastmaster. Dr. Hollis Godfrey, '90, president of the Drexel Institute, gave a welcoming address to which President Harold B. Richmond, '14, of the Electrical Engineering Society replied. W. H. King, a graduate, assistant corporation councillor of New York and President of the "All-Technology Association. Prof. W. H. Thompson of the Institute and John Ritchie, Jr. who accompanied the party, were the speakers.

Friday morning there was a trip to the Midvale Steel Company where the process of steel manufacture was carefully studied. The men had an opportunity to see a great variety of work. Several large guns for coast fortification were being made. The party arrived just in time to see the topping of two open hearth furnaces and the pouring of their contents to form a 120-ton armor plate.

At the end of the inspection of this plant the party returned to the hotel and then left by a special car attached to the 2.00 p. m. train for New York. At New York a transfer was made to the Fall River boat on which the party embarked for Boston.

The men arrived in Boston early Saturday morning, and it was voted that the trip was the "best ever." The party then broke up, every man feeling that the educational benefit was greater than could ever be attained by any other means.

The expense of the entire trip including all transportation, city fares, and meals was within a few cents of \$25.00.

NOTICE.

If there are any members of the Technology Aero Club now in the Institute would they kindly communicate with J. M. Livermore, '15, by leaving their names at the Cage.

CLASSIFIED ADS.

WANTED—Track men to report Track stories, Basketball men for Baseball stories, etc., for "THE TECH." Leave note at the Cage for L. E. Best, Athletic Editor.

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