

# THE TECH

VOL. XXX. NO. 144

BOSTON, MASS., TUESDAY, MAY 2, 1911

PRICE TWO CENTS

## MECHANICAL ENGINEERS VISIT BOILER PLANT

M. E. Society Excursion to Robb Boiler Manufacturing Plant Proves of great Interest.

### 40 TAKE TRIP

President Robb of the Company shows men about the plant

Yesterday afternoon, forty men went on the Mechanical Engineering Society trip to South Framingham to inspect the Robb Boiler Manufacturing Company's Plant. They were accompanied by Prof. Haven, Mr. James, and Mr. Cowlrey. President Robb of the Company met them at the office.

They were first taken to the drafting room. Here, President Robb pointed out a modification of a scotch boiler which has been designed at the Robb Factory. It is internally fired like the ordinary scotch boiler. The combustion chamber is cylindrical in form and the diameter equals the diameter of the boiler. Steam space is obtained by placing above the boiler a tank as is used in water tube boilers. In this way, the entire space above the fire flue is filled with tubes and the very difficult problem of starting that arises in the ordinary scotch boiler is entirely done away with. This boiler is also supplied with a by-pass from the bottom of the upper tanks to the space below the flues, by which excellent circulation is assured, thus overcoming another difficulty of the ordinary scotch type.

From here the party proceeded to the shop which is arranged to give a very economical method for handling the work. The plate for the boilers is received and kept in one end of the factory. At this end also the dimensions for the work are laid out. The centers of all holes to be punched are marked with a prick punch.

The work is then passed to the puncher and a little tip finds the hole made by the prick punch, easily securing accurate punching. It is then passed to the shears which trim the work to the desired size, and then to a very large planer which bevels the edges that have to be calked. The plate for the courses is now rolled into cylindrical form, which operation makes the boiler ready for the riveting. Riveting is done with hydraulic riveters, two of which had a reach of twelve feet and an applied pressure of 105 tons. The rivets were heated in crude petroleum furnaces, being brought to a yellow heat.

All the calking was done with pneumatic calkers and some of the fire boxes for locomotive boilers were being riveted with pneumatic rivets. There was a locomotive fire-box which was being stayed, the staying having proceeded far enough to give the fellows an excellent idea of the complexity of this difficult task.

The next operation that proved of great interest was the beading of the tubes. The tubes are first expanded into place with a prosser expander. The tube is then beaded over with a hand pneumatic beader, and a prosser finisher is then applied, which takes three men to handle.

In the foundry, the front of a locomotive fire-box was having its fire door opening formed. A small hole is first cut into the plate where the center of the opening is to be; the plate is then laid upon a large forge and heated to a bright red heat. It is then withdrawn from the fire and placed over a form and pointed out with large wooden mallets.

The compressed air used by the hand riveters and calkers was made with an Ingersoll-sargent air compressor. A Warren pump was used for the hydraulic pressure. The enormous pressure obtained at the riveters being secured by the use of a very heavy accumulator.

## MEMBERS OF TECH CERW HAVE ENJOYABLE TIME AT ANAPOLIS.

Men Taken On Sight-seeing Trip, Examine Laboratories, Inspect Ships And Have General Good Time.

### FINANCIAL AID RECEIVED FROM ALUMNI.

Entertained Royally By "Middies" Make Wonderful Showing And Will Probably Race Navy Again Next Year.

On April first, A. G. Herreshoff, manager of the Crew, received a letter from the United States Naval Academy asking for a race on April 29th. Up to this time, nothing had been done towards crew this year as there were only a few dollars left in the treasury. After talking it over with Captain W. N. Gere, it was decided that this was too great an opportunity to let pass, for recognition from the Navy meant a great deal—it meant that if we made a creditable showing against such a crew, rowing would be permanently established at the Institute.

As there were only twenty-eight more days until the race, it meant that things must move with uniformly accelerated motion. And they did, too. The next day the services of Coach William O'Leary were obtained and a campaign started for the raising of funds. Not having a shell of their own, one was rented from the Riverside Boat Club and every afternoon, the crew went out, followed by Mr. Howard's gasoline launch carrying the coach.

As Captain Gere was the only one that had had much experience in a shell, the coach had a hard job before him. But the men were willing to work and, due to their technical knowledge, it was not hard for Mr. O'Leary to make them see what he wanted. Rapid advancement was made and when the time came for departure they were in good condition, considering the short time they had for training and the difficulties under which they labored.

Tuesday night, the crew met at the Back Bay Station and took the Federal Express for Baltimore, arriving at 7.50 the next morning. There the electric train was taken for Annapolis. The manager of the Navy crew met the men and took them to the athletic wing of Bancroft Hall, the largest and most magnificent dormitory in America. There seven rooms were put at their disposal, each with a private shower.

At lunch that day, eight hundred midshipmen rose and gave the N-A-V-Y yell ending with three Technology's, which was answered by M. I. T. and "We are happy" the latter making a great hit. After lunch the coach, trainer, rubber, timer and sibs proceeded to the boat house to rig the shell which the Navy had put at our disposal. At 3.30, the crew started out and took a long row up the Severn river, on which the inner course was laid out. The coach and the rest of the party were on the dispatch boat, "Manly," a boat purchased from the English during the Spanish-American War.

Each morning and afternoon after that found the crew hard at work, getting acquainted with the new shell, the course, and becoming more proficient with their oars.

Saturday morning instead of the regular row the crew were taken on a sight-seeing trip up the river and down the bay. The race was scheduled for 4 o'clock that afternoon. As there was very little wind, it was decided to row over the outer course, which was in the bay, passing between the "Olympia," Dewey's flagship at Manila, and the "Hartford," Farragut's flagship during the Civil War, the finish being just opposite the Academy.

At 3.24, the Navy ran down their shell and started for the course. Three minutes later the Tech crew followed them. On the way out a good breeze sprang up from the southwest, making the water rather choppy. Promptly at 4 o'clock, after some trouble due to the wind and

water, the crews were started, neither one getting the lead. At the first half-mile mark, there were bow and bow, Tech rowing thirty strokes, the Navy twenty-nine. At the mile neither crew had gained but both had pushed their stroke up to thirty-two. When the mile had a half was reached, it was still anybody's race, but from that point the Navy began to creep ahead due to their better physical condition and acquaintance with rough water. On the final stretch, Navy forced their stroke up to thirty-eight, Tech putting hers to thirty-six and amid great cheers and deafening blasts of whistles the Navy passed over the line, barely two lengths ahead of a crew that had been in shell only a little over three weeks. Time Navy 11-17; Tech, 11-24 2-5.

The crews:

NAVAL ACADEMY		Height	Weight
		Ft. In.	
Bow	Palmer	6	177
2	Weems	6	165
3	Johnston	6 1	175
4	Meyer	6 1	178
5	Merrig	6 2	183
6	Loftin		
	Captain	6	180
7	Meigs	5 11	168
Stroke	Wood	6	172
Coxswain	Thompson	4	110
	M. I. T.		
Bow	E. C. Gere	5 6	152
2	Sweet	5 11	151
3	Adams	6 2	180
4	Whittlesey	6 1 1-2	168
5	Herreshoff	6 1	170
6	Barnes	6	180
7	Upham	6 2	168
Stroke	W. N. Gere		
	Captain	6 1	170
Coxswain	Wettengel	5 1	116
	Coach O'Leary, Substitute, Jenks, and Rubber Hufsmith also went down the crew.		

The result was a surprise to the "middies," for they had expected to beat us by at least five or six lengths as they have the best crew they have had in years. Their manager, no sooner than the race was over asked us to come back next year as we had put up a great race and had made a hit with the midshipmen. Lieutenant Commander Graham, U. S. N. congratulated each man personally, saying that they had put up a wonderful race and that he would do all he could to see M. I. T. on the schedule next year.

After enjoying our last dinner and packing up we stopped in front of Bancroft Hall and gave them a farewell "M. I. T." and "We are happy." We had hardly ended the latter when every window went up and we were cheered until we were out of the yard.

Considering everything the crew made a wonderful showing and the men should be congratulated, also Coach O'Leary. The alumni, who have financed the crew so far, deserve great thanks for they put up their money when there was nothing in sight. But now there should be no hesitancy on their part in supporting the crew because the men have shown that they want a crew and are able to turn out a good one.

During the time that the men were not rowing they were inspecting the buildings, ships, submarines, torpedo-boats, destroyers, and laboratories.

Manager Herreshoff on making himself known to the head of the steam and electrical laboratories, received the following: "So you fellows are from Tech. Well, I'll be only too glad to show you what we have down here—no, if you are from Tech

Continued on Page 4

## MUSICAL NIGHT TOMORROW EVENING

To take Place at 7.45 P. M. in Huntington Hall. A very Interesting Program Arranged

LADIES INVITED

Mandolin and Guitar Solos, Tech Orchestra and Chinese Music among Features

At 7.45 sharp to-morrow evening at Huntington Hall, the second edition of the Chocolate Soldiers Minstrels will be given.

The complete program has not yet been arranged but there will surely be many interesting features, including Denison's song, "Technology," by the Glee Club. The Musical Club's program will probably last two hours. The entertainment will be chiefly Spring Concert Music as far as the Musical Club is concerned.

It is hoped that the entire body of the faculty will be present. Sections will be reserved so that the four classes may sit together and it is hoped that everybody will be loyal and be there to cheer for dear old M. I. T.

Sections will also be reserved for those taking part in the entertainment and for the ushers. All the fellows are urged to bring ladies, for a good time is certain and there will be plenty of seats.

The program as arranged to date is as follows:—

"Technology"	Glee Club
Mandolin Solo	Richardson
"Glenside March"	Banjo Quintet
"Builders"	Glee Club Quartet
"Gypsy Prince"	Mandolin Club
"La Traviata"	Technology Orchestra
"Raymond Overture"	Technology Orchestra
Chinese Music	Z. W. Chow
Guitar Solos	L. R. O'Farrell
"Roman March"	Technology Orchestra

There will also be Chocolate Soldier hits by H. I. Pearl and K. C. Robinson. Other star attractions will be announced in to-morrow's issue of *The Tech*.

The undergraduates with their lady friends are asked to sit in their respective sections. The doors will positively not open until 7.15 and the performance will begin sharply at 7.45. Those who are to usher are asked to report about 7.10.

## CALENDAR

Send all notices for calendar to E. W. Taft 1913 Institute Committee at the Case.

### Tuesday, May 2.

- 1.30 News Board Meeting—Upper Office.
- 4.15 Union Committee Meeting—Dean's Office.
- 4.15 1913 Baseball Practice—Field.
- 4.15 1913 and 1914 Cross Country Practice—Field.
- 5.00 Technique Electoral Committee Meeting—27 R.
- 4.30 Institute Com. Mtg.—Room 4.

### Wednesday, May 3.

- 4.15 1913 and 1914 Cross Country Practice—Field.
- 4.15 Technique Electoral Committee Meeting—27 R.
- 4.15 1913 Baseball Practice—Field.
- 7.45 MUSICAL NIGHT—HUNTINGTON HALL

### Thursday, May 4.

- Annual Business Mtg. Cosmopolitan Club—Union.
- 4.15 1914 Baseball Practice—Field.
- 4.15 1913 and 1914 Cross Country Practice—Field.
- 5.00 Technique Electoral Committee Meeting—27 R.

**MUSICAL NIGHT TOMORROW, 7.45 P. M., HUNTINGTON HALL.**

# THE TECH

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In Charge of this Issue, A. H. Waitt, '14

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We profess to be at the Institute primarily for study with activities as a very profitable side line. In no case must the latter overshadow the former. There is, however, a practice that is indulged in that foes on a principle diametrically opposed to this. It is allowing men to serve on the Class Day Committee which is to make arrangements for the social side of a graduation to which they can not possibly become eligible. This year was no exception to the rule. There are men now serving on the 1911 Committee who can not possibly graduate. The fault is not theirs; it is that of the definition of who are seniors.

The present interpretation of the constitutional wording "taking a majority of studies with the class" does not require that a second term "senior" is a candidate for graduation or doing a thesis. A list of candidates for graduation is drawn up each year by the Secretary of the Faculty long before Class Day elections are thought of. It is now proposed that his list be the basis of determining eligibility on the Class Day Committee.

In considering this question, we are apt to consider it from the personal side. There are some men who unquestionably have done a lot of good activity work during their four years at the Institute and we hate to see them kept off the Class Day Committee because they have not been able to attend to their studies as well. There is another personal side, however, which must also be brought into the consideration of the principle involved. There are many who have realized that they can not carry on activities heavily and at the same time get through school with their class. They

have, therefore, not done so much that is immediately evident and which gains the greatest attention in these columns and others, but at the same time they have done more—they have given a sane distribution of their time in tending to the primary object of studies and in doing what extra they can in activities. Should they not be given the credit for this, the sincere climax of four year's work?

The Point System was founded on the principle of a sane apportionment of time to activities and work. This will carry out the same idea. Activities are profitable and certainly worth while to all who enter into them but over indulgence or rather neglect of studies is still possible, and does not deserve the reward of election to the Class Day Committee. Those who do both well and there are many of them deserve first place. The Institute Committee will do well to recommend the proposal to the three lower classes for immediate action that those who are candidates for graduation are alone eligible on the Class Day Committee. This gives every one a fair and square opportunity to do their best for the class and for the name of the Institute.

### COMMUNICATION

To the Editor of *The Tech* :

Kindly allow me a few more lines of space to clear up a situation following the issue of my communication of April 27. I have recovered the lost article, with, however, a minor omission—a theatre ticket. Since my last writing, on the following day a notice was sent me from the Roger Building Information Bureau, to the effect that a lost article was there, waiting for my claim. It was told me that the article was found on a physical laboratory bench, in Walker 16, and returned to the Office. Allow me here to add that if it was found on the physical lab. bench, it was not I who am responsible for the guilty act. There must be one other culprit whoever he might be, who had certain ungentlemanly designs of his own. It is very probable that, when unsuccessful in his attempt the "dishonorable gentleman" endeavored to find an easy way out by throwing hot water back, with the intention of doing damage to some other man; and getting only the best to his own satisfaction. This might explain the reason of the article being curiously found on the bench without my letting it there, and returned very improbably by the same gentleman unless he be the biggest fool on earth.

The purpose of this writing is to make plain that the gentleman who found the article and returned it to the Office might deserve credit and also my thanks. Again thanking you, I am, sir,

Yours truly,  
Tong Pao Tung.

April 29, 1911.

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on the man who doesn't know what's what—  
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on the man who does know.

10

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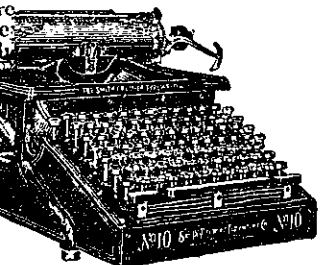
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**TENNIS WORK BEGINS WITH  
 SPRING TOURNAMENT**

Entries should be handed to Covill  
 or Woodward at once. Drawings  
 made Thursday

**DARTMOUTH MEETING, MAY 11**

With the coming of the warm spring  
 days the tennis management is becoming  
 again active and the courts are again  
 being filled by the men who are in-  
 terested in the sport. The courts at  
 Tec Field and those at Jarvis Field at  
 Cambridge are in first class shape and  
 are ready for use at any time. Now is  
 the time to get started if you want to  
 make the team or win out in the spring  
 tournament.

The entries for this tournament close  
 on Thursday of this week according to  
 the posters on the bulleting boards and  
 the drawings will be made in the Union  
 as soon as possible. They will be posted  
 at once and the first round of the tourna-  
 ment should be played off on Saturday  
 if possible. Get your name in at once  
 to either F. W. Covill, '11 or C. R. Wood-  
 ward, '12 so that you may draw a match  
 and get a good start in the beginning.  
 The entry fee for a single match is seven-  
 ty-five cents, for doubles it is fifty cents  
 per man.

Everybody that is now in the 'State  
 that can play tennis should come out for  
 the team, for we are on Dartmouth's  
 trail and want some revenge for the defeat  
 that the team got when they were up in  
 Hanover last fall. Harris, the Dart-  
 mouth captain, won the N. E. I. L. T. A.  
 Championship last year and will be one  
 of the most formidable of their men in  
 the coming meet with them which comes  
 on Thursday, the eleventh of May.  
 This is the day before the track team goes  
 after the Green and we are pulling for a  
 double victory.

The team is to be made up from the  
 men who are at the top of the challenge  
 list (posted in Rogers Corridor) so get  
 busy and pull down the man who is  
 next ahead of you. This will, of course,  
 help you in making the team, but far  
 more than that, it will help strengthen  
 the team and make more probable a  
 victory over Dartmouth. This victory  
 for us, will mean that we will get the  
 Spring Intercollegiate Tournament at  
 Longwood a little later in the year.

Everybody wants to trim Dartmouth  
 and everybody wants to help out in In-  
 stitute Athletics, if tennis is your line  
 now is the time for you to help. The  
 courts are ready and the management will  
 welcome you with open arms. Just  
 come around some time before Thursday  
 night and hand in your name, then get  
 to it, and remember that you are after  
 Dartmouth's scalp to pay for the one  
 that she took from Technology last fall.

It might be well to call to mind that  
 the last match of the fall tournament  
 has, as yet, not been played off, for Par-  
 ker and Woodward are seemingly unable  
 to get together to decide the champion-  
 ship. The men who go out for the spring  
 tournament are asked to make arrange-  
 ments to play off their matches as soon  
 as possible, so as to prevent the recurrence  
 of anything like the experience of last  
 fall. That became almost a joke and  
 the candidates for the team will co-  
 operate with the management in play-  
 ing the matches off just as rapidly as  
 possible so that the team may be pick-  
 ed early.

**ANNUAL DINNER OF  
 BIOLOGICAL SOCIETY**

On Wednesday evening, May 3, at  
 six thirty o'clock, the Biological So-  
 ciety will hold its regular annual dinner  
 at the Technology Club. As this dinner  
 is the last social event of the Club year,  
 it is hoped that the attendance will be  
 very large.

J. Scott McNutt, Health Officer of  
 Orange, New Jersey, William Lym in Un-  
 derwood, special lecturer of biology to  
 the Institute and Professor Sedgwick,  
 the head of the biological department,  
 will be the speakers of the evening. Mr.  
 McNutt was graduated from Course  
 VII in 1908 and was one of the speake  
 s at last year's dinner.

It was thought best to have a *compara-*  
*tively* sober dinner for once, so the noise  
 Committee will probably not be on hand  
 However, there will be surprises, one of  
 which is a new kind of dish that will be  
 served.

Tickets are one dollar per and they  
 may be secured at any time from the  
 officers of the society.

On Thursday, May eleventh, the fol-  
 lowing day, the annual election of officers  
 to the Biological Society for next year  
 will be held in room 28 Pierce Building.

**FATIMA**

**TURKISH  
 BLEND  
 CIGARETTES**

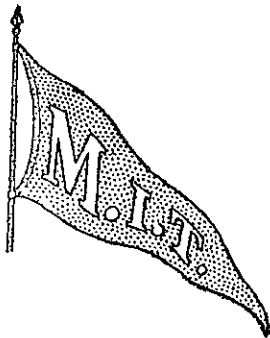
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NOTICE

By applying at 16 Rogers Seniors may obtain any papers written by them and now in charge of the English Department.

Everytime you receive a nice, clear cut notice you may know that it was gotten out economically opposite The Union at 39 Trinity Place, Telephone B. B. 1387, The Tech Typewriting Bureau.

DRAWING DEPARTMENT

Week of May 1st.  
Descriptive Geometry.  
Construction 9.  
Examples 1. . . 4.  
(Time, 6 hours)

Seniors

Are you running a thesis where you have to draw up data sheets? Let us get out a neat printed, ruled data sheet on thesis paper that will look much better and will save you time and trouble. Opposite The Union The Tech Typewriting Bureau

NOTICE

I have stubs, bearing the following names and will refund money paid for the Brown trip tickets to the men on presentation of the check. Men whose names are not here please see man who sold you the ticket. Names as follows: R. D. Sampson, J. J. Strachan, D. L. Sutherland, W. Schaurte, R. F. Barratt, R. M. Freeman, E. W. Mason, A. W. Mudge, Jr., W. W. Warner, G. P. Capen, A. Loeb, P. E. Rudolph, H. A. Johnson, L. R. Block, and R. C. Brett. (Signed.)

L. W. Chandler, Ath. Ed.

Continued from Page 1.

there is no need of my going with you. You fellows go down and run every damn thing you see." We went down and found a wonderful laboratory and thanks to the old "Stute" we were not entirely lost either, although there were a number of things we had never seen before. We found a full sized model of every type of steam engine, gas engine, boiler, pump, turbine, dynamo, etc. Nearly all the engines, turbines and pumps were run by compressed air. They even had a complete quadruple expansion steam engine with boilers, service condensers, etc. Everything set up just as it is in one of the battleships, even this big unit was run by compressed air, enabling one to study the function and action of each part.

A fifty-foot working model of a floating dry dock containing a battleship was found and operated. We came across a De Laval turbine, 7 1-2 H. P., 30,000 R. P. M., geared to a centrifugal pump just as we have in the Pierce laboratory. The greater part of one afternoon was spent in a submarine where every detail was fully explained to us. From every stand-point, the trip was success. We were entertained royally. Nothing was too good for a Tech man.

MUSICAL NIGHT

Members of the Faculty and Instructing Staff with ladies are cordially invited to attend Musical Night. A section will be reserved for them.

Undergraduates, with or without ladies, will please go to their respective sections. A section will be reserved for the Musical Clubs, orchestra, and individuals who are to take part.

The doors will not be opened until 7.15 and the performance will begin at 7.45 on time. Men who are to usher will please report about 7.10.

H. M. Davis, 1911.

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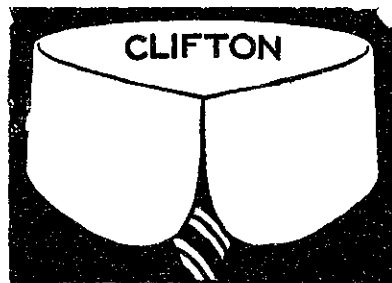
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