

The

# PHI.



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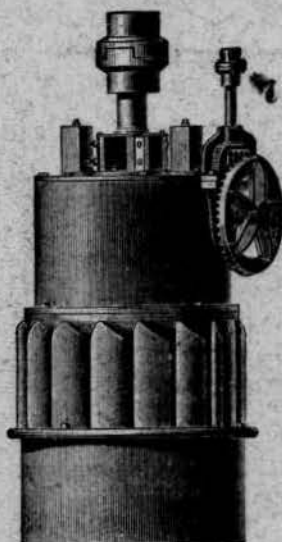
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# THE W P I

Vol. IX.

WORCESTER, FEBRUARY 15, 1894.

No. 17.

## THE W P I.

Published on alternate weeks, during the School Year, and devoted to the interests of the Students of the Worcester Polytechnic Institute.

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We have received a communication from one of our prominent graduates with regard to a subject to which we have given considerable attention both in the past and at the present.

We are informed that not sufficient prominence is given to personal and alumni notes, and to this charge we are forced to plead guilty. Yet we are obliged to advance the excuse, that the graduates themselves are to blame in not supplying us with information concerning themselves or their fellow graduates. On graduation from the Institute classmates are separated, and many never meet again, although they cherish the memory of each other and are interested in what each other is doing. To supply this information is one of the prime duties of the W P I and it lies with the graduates to decide whether it is to be done in a successful manner or not.

There is on the part of most men, a natural aversion to forward information of their personal movements and achievements;

there seems to be a slight dislike to see their names in print, an inherent modesty which tells them that others do not care to know what they are doing. In this, of course, they are wrong, as every man is desirous of learning what his classmate is doing. In cities where a number of graduates reside news concerning one another in that city would, perhaps, be a trifle old to them; but graduates in other cities would receive the information with welcome. The W P I serves as the medium of exchange of all news concerning the Institute. All that is necessary then, is for each graduate to keep us informed concerning himself, especially when he changes his address or his occupation.

We take this method of showing our appreciation of the suggestions offered by our correspondent and offer our thanks for the means of furthering the interests of the W P I.

We have met the enemy and this time we are theirs. No excuses are needed for the recent defeat in the team race; we must simply credit our rivals in the Hub with being a faster team. The victories for each Institute are now one each, and as there are prospects of a third race, there is still a chance to atone for the defeat.

The time is now approaching when thought must be given to the intercollegiate contests in the spring. The teams in our rival colleges have already begun to prepare for the spring meet, and we, as usual, are slow to commence.

The Intercollegiate Athletic Association,

at its meeting last Saturday, voted to hold the field-day in Worcester, so that the expense of sending a team out of town will be avoided, and there is now no reason why training cannot at once commence.

The advantage gained from obtaining a large number of aspirants for athletic honors from the lower classes cannot be overestimated. Often it is discovered by chance that a man, a Senior, perhaps, who has given no time to athletics, would make a very promising candidate with a little training. In the past few years we have had several such cases. Members of the two upper classes have, without the slightest warning, suddenly burst forth from obscurity into great prominence. If such men had undertaken to show their ability during their first year in the Institute, there can be no doubt that before graduation they would have been the heroes of more than one intercollegiate contest.

So it is not with expectation of immediate reward that the Freshman should commence to train himself now. There are those who show themselves masters of their special game at the first trial of it; and there are those who must try steadily a few years before they are able to excel. No one can tell to which of these two classes he belongs until he makes his effort. Both of these classes are wanted, as the former supplies material for present use and the latter serves to prepare it for later years.

#### W. M. E. S.

The regular monthly meeting of the Washburn Mechanical Engineering Society was held Monday Evening, February 12th. The meeting was enthusiastically attended, despite the fact that a howling blizzard was sweeping Tech hill.

The meeting was called to order by President Burdick, and after the reading of the minutes of the previous meeting by Secretary Alden, the names of Messrs. H. S. Davis and Poore, members of the class of '95, were proposed and admitted to membership.

Between eighty and ninety members were present, and chairs were in such demand that several were broken in the mad rush for seats.

After giving a short history of Mr. Risteen, Mr. Burdick introduced the latter, who was received with enthusiasm.

We are glad to see that the benefit which may be derived from attendance at the meetings of the W. M. E. S. are gradually coming to be recognized and appreciated. Almost the entire class of '95 is enrolled in its membership. The alumni are also represented in large numbers.

The men who speak at these meetings are men versed in practical knowledge, and embrace in their discourses the latest developments in their particular branches of research or daily business. Take for instance, the discourse Monday evening. Two sides of the large mechanical model room were lined with sketches, illustrating the lecture graphically.

By far the most interesting part of the lecture, was the series of experiments. The apparatus consisted of several batteries, connected with an induction coil, the latter being connected up through different tubes at different times. These tubes were of various shapes, and were, without exception, rid of part of the contained air. The current passing through the maffected the molecules in such a manner that torrents of illuminated particles could be seen going to and coming from specific points. One especially interesting piece was a sort of "trolley road" inside a horizontal tube. The car was set and kept in motion by the action of the molecules.

The whole series of experiments was very instructive. The instruments were used by the kind allowance of Messrs. Queen & Co., of Philadelphia.

#### THE PRACTICABILITY OF THE NEW SYSTEM OF RULES.

Over three months have now elapsed since the much talked of new rules went into effect. Consequently it would be well to get some idea of the working of the new system.

At the outset the new regulations were largely in the nature of an experiment, for, although in use in several other colleges in this country for a number of years, it was not known how they would succeed, in a college having so large a number of working hours per week as ours.

Have they succeeded, or in other words have they accomplished their object? This naturally brings up the question: What was their object? To substitute for the antiquated excuse system, a system which should keep the efficiency of the school at its present high standard without such a strain on the morals of the students as the excuse system invited. This was the prime ob-

ject, although several minor considerations also entered into the framing of the rules. Every one admits that the efficiency of a student is materially lessened by absence; it cannot fail to be otherwise. The new rules, acting on this, contain a clause which purposes to keep the absences at a minimum, and at the same time permits of a certain number of absences, which is sufficient in most cases for all necessary causes.

There was danger of course that this limit might be set too low, but the results so far show that the ten per cent. limit was exceeded in but very few cases. This shows that the fear of the penalty was great enough to control the "cutting" inclinations of the laziest students. For we all know that ordinary examinations are bad enough, to say nothing of a special examination, coming directly after a series of absences.

In the first three months there have been only eleven special examinations necessary, and all of these were in the two lower classes, with one exception. Of these eight, three were conditioned, and one of the others was subsequently conditioned in the mid-year examinations, which proved the truth of the previous statements in regard to losses by absence.

There were numerous other cases where students reached the limit of absences, but did not exceed it.

Some allowance must be made for the figures also, when we come to consider that two of the examinations were rendered necessary by absences due to sickness, and the majority of the cases were those in studies which embraced but one or two hours per week, and therefore the limit of absences was quickly reached, in fact one or two of the students were past the limit before they were aware of it.

However, the new rules have, we think, accomplished their object so far, and at any rate, the change from the excuse system is a long stride in the right direction, and when the students become thoroughly accustomed to the new system, the results will, we think, be even more satisfactory than those for the last half year.

#### THE B. A. A. GAMES.

On last Saturday evening at the Mechanics Building, Boston, occurred the annual open athletic meet of the Boston Athletic Association. The event of most interest to Techs was the relay race between teams from Boston and Worcester Techs. We were beaten because the Boston Tech team ran faster, and that is the long and the short of it. But there may be another chance for a race, and if there is we can hope for a better result.

The entry lists in all the open events were enormously large, but nevertheless the games were run off in an admirable style, satisfactory alike to contestants and spectators.

The first event was the novice 40-yard dash. This was run off in short order, in trial heats. Brown of Amherst won first, Green of Harvard second, and Goldmark of Harvard third.

The Loyolas won rather easily in the relay race with the St. Mary A. C., in 3 min. 23 4-5 sec.

After the final heat in the special 40-yard dash the W. A. C. and Suffolk A. C. men came on for their relay race. Although the Suffolks were most confident of winning, the Worcester men had a walk over, Allison and Dadmun, the last two runners, not exerting themselves in the least. The time was 3 min. 27 3-5 sec.

In the open 40-yard dash Allison W. A. C. won second place. Brown, the winner of the 40-yard novice, won first. Amherst expects great things from this man in the dashes next Spring.

Next came the team race between the two Techs. It had been reported that Worcester would be an easy winner, but considering the foundation of this rumor it was looked upon as a bluff and the Worcester men knew that they must run, and run well, to make any kind of a showing. Owen and O'Connor were the first men to run. M. I. T. had the pole and managed to keep it, although O'Connor made two good attempts to pass Owen. In the second Owen used his elbows rather freely and to such effect that O'Connor was hardly in the race afterwards. Thomas started in for M. I. T. with a lead of nearly 20 yards over Allen. Allen started out bravely and reduced the lead distance slightly but couldn't keep it up, and when Whipple began his duty he was nearly 40 yards behind Lord. Whipple ran a great race but could not cut down the lead more than about 5 yards. The most exciting part was to come yet. Gallagher looked rather discouraged when he saw Rockwell 35 yards ahead of him, but it only made him the more determined to outdo himself. The ovation the little runner received from the audience was surely enough to encourage any one, but 35 yards was too much. With each lap, though, it was less, and Worcester men almost began to hope, but it was impossible. The work that Gallagher did was magnificent and it was fully appreciated by every one. He cut down the lead so that at the finish he was not eight yards behind Rockwell, and that man had run himself out. There are no excuses to make; every man did his best, but that was not quite good enough. The time was 3 min. 21 3-5 sec., the best that had been made so far.

The high jump had been progressing all this

time, and the bar had gone up and up. "The bar is now six feet and three inches," and no one was jumping but Sweeney. The bar was cleared with apparently as little difficulty as if it had been a tennis net. "Six feet, three and three-eighths inches." The champion failed twice, and the third time he touched the bar with his arm just enough to make it drop. The fourth time he cleared it, and the world's indoor record for the high jump was broken.

The 600-yards was run in heats, Lohnes and Delaney of the W. A. C. winning places in the finals, and Delaney winning second place.

In the invitation mile, McLaughlin, W. A. C., took third.

In the hurdle race, Chase of Dartmouth, and W. A. C. took second.

Amherst won from Dartmouth in their relay race in 3 min. 18 4-5 sec. This was the fastest team race of the evening, and the only one which was closely contested from start to finish. The mile walk, as usual, was complicated because of the number of starters and the various handicap. Beaudette, W. A. C., having a handicap of twelve records, won first place in 8 minutes, 8 2-3 records. Brown, Amherst, and Dartmouth started men in this event, but they were unable to distinguish themselves, notwithstanding their handicaps.

#### THE N. E. I. A. A. CONVENTION.

The New England Intercollegiate Athletic Association held their eighth annual meeting at the Quincy House, Boston, last Saturday, February 10th. Brown, Bowdoin, Amherst, Dartmouth, Worcester Polytechnic Institute, Trinity, and Wesleyan were each represented by two delegates, while Williams sent only one, and University of Vermont, none. E. W. Davenport and F. W. Parks represented W. P. I.

As had been rumored, Massachusetts Institute of Technology made application for admission. The matter was thoroughly talked over and F. W. Lord, president of the M. I. T. athletic association, stated the reason why they hoped to be admitted and why they had not applied before. On the vote by colleges all voted yes except Amherst and Wesleyan, and the two delegates from M. I. T., who had been waiting outside, were admitted to take part in the remainder of the meeting.

The matter of adding a one-mile bicycle race to the list of events was presented by Wesleyan, but on the vote it was lost, Brown, M. I. T., Dartmouth, Williams and W. P. I. voting no.

It was voted to change the distance from the scratch to the first hurdle in the 220-yard hurdle race from 20 to 15 yards. This was done so that records made at the meets could be compared

with the American Intercollegiate records and also so that a man need not break his stride in training for the two different meets.

The story that all the money in the treasury had been divided had been pretty thoroughly circulated among the different colleges, and when the treasurer made his report of a balance of \$200 there was a general laugh and a big feeling of relief among some of the representatives who had expected an extra assessment.

A design for an emblem for the association, to go on the medals, banners, etc., was submitted but was not generally approved, and a committee consisting of Hanford, Amherst, Davenport, W. P. I., and Lord, M. I. T., was chosen to procure a suitable emblem and submit it to the executive committee. A committee was also appointed to solicit from some firm dealing in athletic goods a championship cup.

The place for holding the next annual games had been discussed to some extent before the meeting, but most of the delegates were careful about giving any positive opinion. After all the other business had been transacted this matter was brought before the meeting. Contrary to expectations, no offer was received from the Springfield Bicycle Club and Worcester seemed to be the only place under consideration. The same offer from the Worcester Athletic Club as was made last year, was made by Mr. Irving E. Bigelow, vice-president of the club. It was also guaranteed that the course for the 220-yard flat should be laned off in a satisfactory manner. On the vote by colleges that the offer of the W. A. C. be accepted Dartmouth voted no and the other eight colleges yes.

The election of officers for the year followed, and resulted as follows. According to custom the presidency goes to the championship college. President, W. M. Ames, Dartmouth; first vice-president, E. W. Davenport, W. P. I.; second vice-president, C. D. Broughton, Trinity; secretary, S. H. Hanford, Amherst; treasurer, F. W. Lord, M. I. T.; executive committee, W. M. Ames, Dartmouth, *ex-officio*; J. W. Crawford, Bowdoin; S. H. Hanford, Amherst; C. D. Broughton, Trinity; R. C. Taft, Jr., Brown; A. G. Bugbee, Dartmouth; W. W. Peck, Wesleyan; R. H. Jaffrey, Williams; F. W. Parks, W. P. I.; Benj. Hurd, Jr., M. I. T.

#### SOCIETIES AND CLUBS.

There seems to be in the Institute a lack of that loyal and fraternal feeling so common in other colleges. The chief cause for this lies in the fact that the students seldom are gathered at any place in large numbers. Of course, in other colleges, where a majority of the students



occupy dormitories on the college grounds, and where many eat their meals together, there is a grand opportunity for conversation on subjects of interest to class and college affairs. In this very fact, it is conceded, lies the advantage of training-tables, for the athlete not only has a chance to diet, but can talk over and get new ideas about the particular branch of athletics in which he is engaged.

To the student at the W. P. I., however, these advantages are not given. And the question now arises, "How shall we cultivate that social and loyal spirit?" Since we, in the daily routine of our work, have little chance while at the Institute to think of such matters, we must look for some other means, and this we find in societies.

There are already in existence, for the purpose of social advancement of their members, two societies: the Tech Co-operative Society, and the Pi Iota Chapter of the Phi Gamma Delta Fraternity. And it is noticeable that we find more of that desired college patriotism among the men in these societies than we do in double the number of men at large. And the reason is very evident: the result of belonging to any organization is, without doubt, the cultivation of sociality and loyalty in a person. And this is just what is needed. Patriotism to class and college immediately expands to patriotism for city, State and country, the chief requisite for a true American citizen.

Among the other societies formed at the Institute are the Tech Y. M. C. A., the Camera Club, the Tennis Association, and the Washburn Mechanical Engineering Society; not to mention the Foot-Ball and Athletic Associations.

The W. M. E. Society deserves further mention. It seems strange that a society with such advantages should have so small a membership from the undergraduates. The advantages must be underestimated. At every meeting at least two papers on mechanical subjects are read and discussed. In this last fact lies the greatest advantage of the Society. The undergraduate attends the meetings, hears read, possibly, a paper on some theoretical appliance. Then comes the discussion; all who wish ask questions; and the alumni, practical and experienced in their views, talk over the practicability of the appliance. In this way, much of the theory, which we have studied, is brought in contact and in contrast with practice. The result is easily seen. The idea upon which the whole course of study at the Institute is founded, is furthered in these discussions.

There is another society which should be mentioned, as it is a very important one. The Socialists of the Senior Class is a society, which

was formed from the Class of '92, for the purpose of binding the better element of the class into a strong working body. The result was a great success, and a grand benefit to the class itself. The membership, in the last two classes, seems to have decreased, rather than increased, as it should. The men do not seem to appreciate the benefit derived from united and unhindered action.

Those men who belong to no social organization have no idea of the good the individual and the college receives from the impetus given by social relations. There is still room in the Institute for the formation of other social organizations. Let them be formed with the purpose in view of benefiting your college as well as yourself. There is no doubt but that, with social advancement of its students, there comes also an elevation of the character and position of the Institute, especially in its relations to other colleges.

#### A COMMUNICATION.

*To the Editors of the W P I.*

If there is one thing more than another that I dislike, it is continual grumbling and fault-finding with the Institute. Yet I think that all will agree with me in what I am about to say. Shall it be said, it is time to call a halt in our ranks? No, no! we are hopelessly halted, and that is the cause of this article. It is time to call, "Attention! Forward march!"

What is all this about? Well, it is not our studies. You all know that we are progressing fast enough in them to suit even the most ambitious of us. It is in spirit, school spirit, that we are dead. Who of us—and few we are—who have attended the Athletic and Foot-ball Association meetings of late can have failed to have noticed this?

Although a member of the Institute only since last September, I feel justified in saying that the students do not support the organizations as they should. Perhaps the contrast between the spirit shown here and that of the preparatory school from which I came, makes this lack of spirit seem more prominent to me than it does to many.

Let me give a short account of how the athletic association carried on its business in that school, and the reader can contrast it for himself with the way we do here.

This preparatory school had a membership of about one hundred and seventy-five fellows, who were by no means wealthy. Every student was a member of the association, and felt it his duty to be present at every meeting. When officers were to be elected a meeting was called, and

men nominated, to be voted on a week later. During the week, the chief topic of conversation was, who was the best man for the place. When it came time to vote every man cast his ballot, and the best man always got the place, and thus the students were assured that the business would be handled in a perfectly satisfactory manner. In the fall it became necessary to raise money to support a foot-ball team. A meeting was called; every man was there. The president addressed the meeting, and then called for voluntary subscriptions, and he didn't have to wait long to get them either. Everyone thought it his duty to give all he was able. In less than ten minutes over three hundred dollars had been raised, and let me add, no one was ever known to fail to pay his dues. During the winter and spring two such subscriptions were raised for athletic teams, and one of like amount for base-ball; in all, over \$1000 during a school year.

Who can doubt but that after such manifest spirit, every one took great interest in the teams, and were always on hand to cheer them to victory, or to comfort them in defeat, and although it was more often the latter duty they had to perform, not a man could be heard to grumble, and each one was ready to help all in his power when next called upon.

Contrast this with our Institute, and who can help but wish he were back in the old "prep" school!

A meeting is called here, a few loyal men show up, but the majority of students think it unimportant, and do not attend. Officers are to be elected; some one nominates a man; another fellow moves that nominations cease, another that we vote by acclamation. We all say "aye," and the meeting is adjourned.

Now it is not the men who are elected that I wish to criticize, for we know they serve us to the best of their ability. But it is the spirit shown by the students, the lack of interest in such matters, that I deplore.

If we would show more enthusiasm, support our teams with voice, money, and our presence at meetings, as well as at the games, who can doubt but that we would be much more successful in all ways. The base-ball season and intercollegiate sports are not far distant. Let us each and everyone arouse himself, stir up enthusiasm, and support our organizations to the best of our ability. With this we are sure to be successful, and to keep up our good name among the colleges and institutes of the country. Without this we are doomed to quick and certain death, and to become a back number among our rival colleges.

Once more let me urge all to awake and arouse such spirit as will sweep over us like

"sunshine from a gloomy sky," and carry us down the field far a head of all our competitors.

A FRESHMAN.

### CHANGES IN THE INSTITUTE GROUNDS.

The past few years have seen marked changes in nearly every department of the Institute. New buildings have been erected, new courses added, and the length of the courses increased.

In the erection of the new buildings, the appearance of the grounds has, of necessity, been changed. As one looks back in reminiscence, there comes to his mind the visions of a magnificent grove of hemlocks which covered the space now occupied by the Salisbury Laboratories. On the side-hill east of the Laboratories, a few yet remain, but they are but vague reminders of the past sylvan retreat. In this grove the "Preps" found much needed recreation and exercise, with such athletic implements as flying rings, trapezes, ladders, and swings, which were suspended from the trees. From the edge of the grove to Salisbury Street was a mass of undergrowth, which did not enhance the beauty of the grounds.

Now we see a spacious lawn, extending from the building to the street, which is certainly a vast improvement on the old condition of things. A well kept driveway now crosses the hill to the north, making access to the laboratories very easy.

East of the shop, in the hollow now occupied by the tennis courts, are the grounds once used for the Institute athletic contests. On field-days the chairs from Boynton Hall were brought into requisition, and the hillside presented an animated appearance. Of course with a turf track, with about twenty laps to the mile, no phenomenally fast records were made, but sack races, wheelbarrow races, and doughnut races, kept up the enthusiasm of the spectators till the end.

On the south side of Boynton Hall the hill has been cut down considerably and the cutting through of a new street (around the base of the hill), to succeed the historic "Jo Bill Road," has greatly improved the appearance of that portion of the grounds.

The steep bank, sloping from Boynton Hall to West Street, was formerly used as a dumping place for the refuse from the chemical laboratories, and woe betide the barefooted youngster who ventured to scale the height. The proficiency of the students in breaking apparatus would be painfully evident to him, after a few steps.

Surely, with all these changes, for the most part improvements, we cannot say the grounds have been neglected. And few colleges can boast of a more handsome location than ours.

With the presentation of an athletic field our joy would be complete, as our grounds are certainly lacking in this one particular; but let us hope that at a not far distant day, some benevolent friend of the school will say:—

“Here, long-suffering athletic association, receive thy just reward, a field on which thy efforts may receive their full compensation.”

### VISITS TO THE WIRE MILL.

On Tuesday and Wednesday of last week divisions of the Senior class made excursions to the Washburn and Moen Works on Grove street. The testing machine was the chief object of interest and several operations of this interesting piece of apparatus were witnessed. The process of obtaining pure copper plates was also seen and carefully investigated by many of the students. These trips were probably the most profitable that have yet been indulged in, and those who take advantage of these opportunities to observe the practical working of the principles which are being studied lose nothing and gain much by doing so. On the other hand, those who neglect the chances which are being procured for them are allowing their more willing associates a handicap which they cannot hope to overcome in any other way.

### Y. M. C. A. CONVENTION.

On Friday, Saturday and Sunday, the 2d, 3d and 4th of February, a convention of delegates from the 7th District was held at Spencer. This district comprises part of Massachusetts and Rhode Island. The W. P. I. and Worcester Academy are the only college societies in these limits. The object of holding conventions in small towns is to create an interest in the association work, where there are no branches.

The meetings were held in different churches on different days. Several gentlemen of our acquaintance spoke, Mr. Gale being amongst the number. State Secretary Armstrong, also, had some interesting thoughts. Mr. E. G. Watkins, W. P. I., '86, the first president of the Y. M. C. A. in the Institute, spoke on financial management. Mr. Nathan Heard, '93, spoke on Association work in connection with student life. There was quite a diversity of subjects, among them being the financial aspect, volunteer work, and different methods of carrying on meetings.

Altogether it was a very enjoyable meeting to those who attended, and enjoyable, also, to those who found it impossible to be present, in that it shows them that the work is still in an encouragingly flourishing condition.

### FOOT-BALL ASSOCIATION.

A poorly attended meeting of the Foot-Ball Association was held in the chapel last Wednesday noon. Harry D. Temple was nominated for foot-ball manager for the ensuing year. He was unanimously elected, there being no other candidates for the position. The advisability of electing an assistant business manager who, if qualified, would become business manager next year, was discussed, but no action was taken. The meeting then adjourned.

### BASE-BALL.

The annual meeting of the Base-ball Association was held in the chapel, Wednesday noon, Feb. 14th. Officers for the ensuing year were elected as follows: President, Alvah W. Clement, '95; vice-president, Thomas Coe, '96; secretary, Walter E. Hapgood, '95; manager and treasurer, George C. Gordon. The directors of the Association for this year are Dwinnell, '94, A. H. Warren, '95, Riley, '96, and Benchley, '97.

### CLASS ELECTIONS.

The class of '94 having nominated candidates for class officers a week in advance, elected the following: President, E. B. Whipple; Vice-President, J. M. Gallagher; Secretary, H. S. Whitney. Mr. Whipple had been elected athletic director at the previous meeting. C. G. Harris was last fall elected treasurer for the year.

The class of '96 held their semi-annual meeting for the election of officers on Friday, Jan. 23, and selected the following men: President, Thos. H. Coe; Vice-President, E. F. Darling; Treasurer, W. H. Cunningham; Secretary, H. G. Phelps; Athletic Director, C. P. Ware.

The Freshman class met in Room 19, Saturday, Feb. 3, for semi-annual election of officers.

The following officers were elected:—President, B. E. Eames; vice-president, G. H. Ellinwood; secretary, R. E. Fish; treasurer, H. L. Daniels; athletic director, H. H. Morse; captain of athletic team, O. W. Lundgren. The class was in favor of adopting Dr. Fuller's plan of a conference committee.

### PERSONALS.

Everett J. Lake, of the class of '90, is pursuing an advanced course in architecture and drawing at the Illinois State University.

Thomas S. Stevens, ex-'94, now holding a responsible position in the Rhode Island Locomotive Works, recently visited the Institute.

Dr. A. S. Kimball spoke on current electricity at the annual banquet of the civil engineers of Worcester, held last Tuesday evening at the Board of Trade rooms.

## REMARKS OF CRITICUS.

Since the appearance in these columns of an article regarding the use of the library, Criticus has heard and received many favorable comments upon the thoughts there expressed. But what is better, the authorities have followed his suggestion and once again is the library open to the use of all students at all times. Criticus, in behalf of the under classmen, heartily thanks the authorities for their action, whereby none are losers and many are gainers.

\* \* \* \*

New rules and changes! But this time, while they are of interest to all Tech men, they do not apply to us, but to our sister institution the Massachusetts Institute of Technology. The faculty there feel confident that the strain of the semi-annual examinations is too great on the average student of the two lower classes and on this account have determined to do away, to a great extent, with formal examinations for the Freshmen and Sophomores. The rank of these students in most of their studies will be determined by means of informal quizzes, which will take the place of the daily recitation, when given. It is not the intention of the faculty, however, to do away wholly with long examinations for the first and second year students; so, to the end that the student may gradually become used to formal examinations, these classes will have regular semi-annuals in one or two of their more difficult subjects. This change does not apply to members of the Junior and Senior classes, who will have to take their examinations in all subjects as heretofore. The faculty considered seriously of totally abolishing all examinations, as has recently been done at Cornell. After mature deliberation such action was deemed inadvisable.

The other step taken was the adoption of a rule to the effect that each instructor should act as adviser for six first-year students. Each student has the privilege of selecting the instructor he desires, if he has any preferences, if not, some instructor is appointed for each half-dozen students. In no sense is the instructor responsible for the student's actions, his duty being solely to give him friendly advice and counsel in his studies or outside work whenever the student so desires. This scheme has met with the hearty approval of all concerned, both Freshmen and instructors.

\* \* \* \*

Criticus wishes to remind all athletes, would-be athletes, and those who might be athletes were they willing to sacrifice a little time, that the time to commence training for intercollegiate and

class sports is at hand. Now that the Intercollegiate Association has wisely voted to hold the sports in Worcester again this year, more men will be entered than were the sports to be held elsewhere, owing to the fact that there are no travelling expenses to pay. And right here Criticus would assure all, that those who train faithfully from now to intercollegiate day are sure of positions on the intercollegiate team. The manager of the Athletic Association has already secured the rink for training purposes, and all Tech men can train there free of charge any evening from now until the time when outdoor training is commenced. This opportunity should be taken advantage of by everybody who is not positive that he will not make athletics a success. Often it is from a sense of bashfulness that many men, who might make fast runners or high jumpers, are kept from training. Many of the best runners here in the Institute are men who never thought they could run until they tried.

It is naturally to the Sophomore and Freshman classes that the manager turns when in search of recruits to take the place of those who have graduated or for other reasons are not with us. However, there are men among the Juniors and Seniors who, could they be induced to train, would bring honor not only to themselves, but to the Institute. Then again it should be remembered that in order to do one's best mentally the body must be in a strong condition physically. And how can such a condition be better obtained than from systematic, moderate training.

It is the hope, both of Criticus and the manager of the Athletic Association, that fifty men at least commence training now and continue it faithfully until the date of the intercollegiate sports. If this is done, we will stand nearer the head of the list, after the points have been reckoned up, than ever before.

\* \* \* \*

Now that the burlesque has been practically abandoned, would it not be a good idea for the forces of the Institute to unite and give an entertainment, not a poor one but one that would be a credit to those taking part and one in which a cent could be netted?

The banjo club would of course be the foundation of such an entertainment. But let us see what else we could have. In the first place a glee club of ten or fifteen voices could be formed without much difficulty. Under the charge of some musical director it would take but a few weeks to learn as many popular songs as such an entertainment would require. The formation of a glee club was discussed early this fall, but that was all. Then '97 has an orchestra.

It may not be equal to Sousa's but it would be able to render a few selections excellently without doubt. These are all the organizations that Criticus calls to mind just now.

Now for the specialties—the olio, so to speak. We have a good flute-player here as also a cornet-player and an excellent whistler, to say nothing of club swingers, acrobats and sufficient other talent to round out an evening's entertainment. The clowns of last year's burlesque might be presented again this year.

Such a show as Criticus has outlined could be "put on the road" with small outlay. An entertainment of this nature should easily fill a hall, the size of Curtis hall, two nights. And if it was a success, which it could hardly fail to be if each man was willing to do his share, a few out-of-town performances could profitably be given during the spring vacation.

The scheme as here detailed appears to Criticus a most excellent one. There are some reasons why it would be preferable to the burlesque. The cost of production, using an economic term, would not be so great; the amount of time devoted to it would be far less than the burlesque would require; the net gain to the Athletic Association could hardly help being larger than that of last year. But in order to have the entertainment a success, it must have the hearty co-operation of all the students. Each one must not only support it financially but also be willing to step forward and do what is requested of him.

Can such a scheme be successfully carried out? Criticus believes it can.

### COLLEGE NOTES.

Bowdoin has 316 students.

Cornell will graduate 219 men this year.

Yale and Harvard are carrying on a chess tournament by correspondence.

Mass. Institute of Technology have representatives from 40 States and 20 foreign countries.

The students of Amherst give a minstrel show in March for the benefit of base-ball there.

The University of Missouri has received \$1,525,000 from the State legislature since 1891.

University of Pennsylvania has 2,223 students, thereby leading Yale by 15 men.

It cost Yale last year for athletics \$45,208.84, of which sum \$16,652.43 was expended for the foot-ball association.

Wesleyan has purchased the mathematical models in the German university exhibit at the World's Fair.

At Philips Exeter the manager of any athletic team must give the faculty a bond of \$250 before he can enter upon his duties.

Boston University has adopted the plan of allowing students to enter on presenting certificates from leading high or preparatory schools.

The Williams catalogue for 1893-94 gives an enrolment of 343, representing 25 States. The faculty number 32 and the alumni, 3,363.

One French and one German play will be given this winter by the students of the Boston University. Both plays are under the management of the professors of these two departments.

At Princeton no proctors or monitors are allowed in the examination rooms, each student is put strictly upon his honor.

The M. I. T. banjo club competed in a tournament open to all banjo clubs in Boston. M. I. T. won first prize—\$50 in cash—defeating six professional teams.

At Williams there is a student who comes from darkest Africa and who, were he in his own province, would be king. He, however, prefers education and civilization to authority.

The suit which was brought against six Amherst sophomores for stealing a negative of the freshman class has been settled by the courts. The fines and lawyers' fees which the case incurred to the students amounted to over \$800.

The library of the University of Chicago recently received 4,200 volumes of the annual debates and records of Congress. This is the most valuable collection of its kind in existence and many of the books are not even owned by Congress.

The president of the sophomore class at Rutgers was recently captured by the freshmen and literally painted green from head to foot. Nine members have been suspended and criminal proceedings against them commenced.

A party of U. of P. students leave New York the first of June for Labrador, where they will stay for three months. The object is to learn of the geology and vegetation of the interior of Labrador, a region about which little is at present known.

It is highly probable that the Amherst senate, a body of ten students organized for the purpose of student government, will be abolished owing to the fact that the faculty intend to rule upon a subject which the senate claims is beyond the faculty's authority.

The new shops connected with Purdue University at Lafayette, Indiana, were dedicated last month. Their cost was over \$100,000 and they extend over an acre and a half of ground.

### ATHLETIC TOPICS.

The Massachusetts Institute of Technology Athletic Club will hold a sparring and wrestling meeting, February 17th, in the gymnasium. The events will be sparring, fencing and wrestling contests, open only to members of the M. I. T., Harvard and B. A. A. James J. Corbett will be the guest of the evening.

A new rule in base-ball goes into effect this year. It is to the effect that any player who, while attempting to bunt, makes a foul, shall have a strike called on him for each foul so made.

Foot-ball rules are to be revised by a committee of five experts, so that hereafter the game will be divested of its objectionable features. The experts are Camp of Yale, Dr. Brooks of Harvard, Moffatt of Princeton, Dr. Dashiell of Lehigh, and one from the University of Pennsylvania, not yet selected. As will be seen, these men are not only foot-ball experts, but also men of excellent discretion, and the rules they may formulate will become the standard of the American game.

A petition was recently presented to the Massachusetts House of Representatives for legislation prohibiting the public exhibition of the game of foot-ball. A bill accompanying the petition provides punishment for any person who takes part in the game when such game is played in the presence of spectators who have paid an admission fee to witness the game. It is unnecessary to say that the petition was indefinitely tabled.

An interesting conflict took place at Wellesley College last week. The Sophomores challenged the Freshmen to a snow-ball fight, which challenge the latter accepted. The time agreed upon was last Monday, Mondays being a holiday for the girls there. The Sophomores spent all Monday morning making a fort and any quantity of snow-balls, preparatory to the fight which was to come off in the afternoon. At the appointed time the Freshmen maidens appeared, clad in their uniform of white sweaters and gymnasium trousers. After an hour's bombardment the fort was taken by the insurgents and the sport was over.

### SCIENTIFIC NOTES.

A new source of power offers in the artesian wells which in the James River Valley and other sections of the West, discharge large volumes of water under pressures of from 125 to nearly 200 pounds. Several electric plants, flour mills, etc., obtain their power from these wells, and the water discharged is used for irrigation and other purposes afterward.

The first utilization of the great tunnel at Niagara took place on the 25th of last month, when the gates were raised upon the wheels at the mills of the Niagara Falls Paper Co. The plant started off most successfully, and is now in steady operation. The power station, it is expected, will be started on June 1st, which will be made the occasion of a general celebration.

The man who adds to the number of electrical applications is fittingly regarded as a benefactor, and in the category of such worthies should be included, we think, the genius who has utilized the electric fan for driving frost out of store windows. The experiment appears to have been tried at Lewiston, Me., with great success, and the business men are said to have put in several fans for such work, as they found they could get rid of the ice in less than ten minutes. The same cure should be effective for steamy windows. There are many places where fans run for coolness in summer could also be employed as an aid to ventilation in winter.

In the manufactures of Great Britain alone the power which steam exerts is estimated to be equal to the manual labor of 4,000,000,000 of men, or more than double the number of males supposed to inhabit the globe.

It does not look reasonable that six to twelve months should be needed to make a billiard ball, but a first-class ball cannot be made in less time, owing to the tendency of carved ivory to shrink. If it shrank equally a ball could be cut and polished in a few hours, but it does not, the shrinkage being greater in the direction of the width than of the length of the tusk. A ball must thus be roughly shaped, then kept for a number of months, until the shrinking process has been completed, when the fine cutting and polishing may be done.

An English watchmaker exhibits an engine of 122 distinct pieces (not including thirty-three bolts and screws) which could be hidden in a lady's thimble.

Scientists are of the opinion that Avery's Island, situated in the delta of the Mississippi, is composed below the top soil entirely of salt. The salt occurs in more or less transparent masses and is quarried for export.

Mr. Swan, the English electrician, declared recently that he had seen electrical blow-pipes capable of melting the stoutest iron so rapidly, that to melt into a fire and burglar proof safe with this instrument would be the work of only a few minutes, and would be both an easy and noiseless operation. As, however, it would require a 40-horse power engine to operate such a scientific tool, banks need be under no apprehension from this mode of attack on their vaults.

**THE ELECTRIC CAPSTAN.**—One of the many recent applications of electricity is exceedingly interesting, affecting, to some extent, the operation of railroads. The innovation referred to is the substitution of an electric capstan for the switching engine. As yet, the use of this appliance is rather limited, but there are good prospects of its adoption throughout the country.

All the mechanism is below the ground, enclosed in a water-tight iron case. This case is supplied with a removable cover, in order that the motor and gears may be easily cleaned and oiled.

The motor has a speed of about twelve hundred revolutions per minute and turns the capstan proper by means of gears. The circuit is made and broken by means of a switch, operated by the foot of the man in charge.

**TECHNICALITIES.**

All of '95's menu cards have not been disposed of. Those desiring them may obtain them of Walls, '95. The price is 25 cents—less than their cost.

The topics for the Y. M. C. A. meetings are: February 21st, Our Words; and February 28th, Joy from Serving Christ.

Ninety-five is discussing the advisability of giving a reception in honor of the Seniors. Nothing definite has been done about the matter.

One of the professors was understood to remark lately "from him that hair-th not shall be taken even that which he hair-th." Was it a joke?

Student G-dr-ch, reading: "Mein Vater! . . . . Erköning hat mir ein Leids gethan!" His translation of same: "My father! . . . . the elfking gives me a pain!"

A number of '96 men are getting quite enthusiastic over a scheme, suggested by one of Dr. Kinicut's recent experiments, by means of which they propose to materially increase the stature and improve the figure of one of their instructors.

We believe that we have not erred in the matter of treating visiting teams with courtesy.—*Williams Literary Monthly.*

Certainly not, Williams, if you treat all teams the way you did our foot-ball team last fall.

Student (in Steam)—Is a crank and an eccentric identical?

Instructor (thoughtfully)—In some cases, but not always.

In a recent number of the *Harvard Crimson* there appeared an excellent list of the leading college papers. There were, however, two omissions in what was otherwise a complete list, the *Tuftonian* and *W P I* being the papers, for some reason, omitted.

Owing to the effects of semi-annuals, '97's class orchestra has ceased to exist. The "grind" on the orchestra, as seen in '95's menu card, suggests a similar joke for '97's half-way supper. How would it look to see the Juniors' cross-country team represented by a single runner?

The class of '97 have adopted the following yell:

Rah! ho! rah!  
Rah! ho! rah!  
P. I. '97,  
Rah, rah, rah.

President Fuller, Prof. G. I. Alden, and Supt. M. P. Higgins appeared before the State Legislature to urge the passage of an appropriation of one hundred thousand dollars to be used for the Institute. One-half of this sum is to be applied to the needs of the Mechanical Laboratory, as more work is to be done in this department in the future.

**A False Alarm.**

In the dim light of 2 o'clock, on the morning of January 22, a figure might have been seen running with mad speed toward the Institute. It looked neither to the right nor left and seemed intent only on arriving there with the greatest possible speed. On it came with frightful velocity until it reached a point from which the Tech was plainly visible; there it stopped abruptly and gazed on the sombre outlines of the silent buildings with a look of infinite astonishment and apprehension. One second it stood thus; then a sound of muttered articulations burst forth amid the laborious attempts to regain breath and then the late runner turned and slowly meandered homeward, endeavoring to dispel from his mind the inclination to kick himself, by treating himself to a smoke. Who was this who, always so mindful of the Institute's interests, had awakened during the night and juggled with the numbers indicated by the fire-whistle till he made them out to be 371 (the number of the Tech fire-alarm box)?

**LOVE AND FOOT-BALL.**

A man and a Vassar maiden,  
With mind and waves atune,  
Talked low of love and foot-ball,  
'Neath a mellow Newport moon.

The Vassar girl had hinted  
That Vassar girls might play  
At Rugby, 'gainst his college—  
And beat them, too,—some day.

"If you should play," he whispered,  
"Your college against mine,  
I'd like to play left tackle,  
On the opposing line."

And drooping her head, the maiden,  
With blushes red as flame,  
Then said: "Since this may be so,  
Let's have . . . a practice game."

—*Inlander.*

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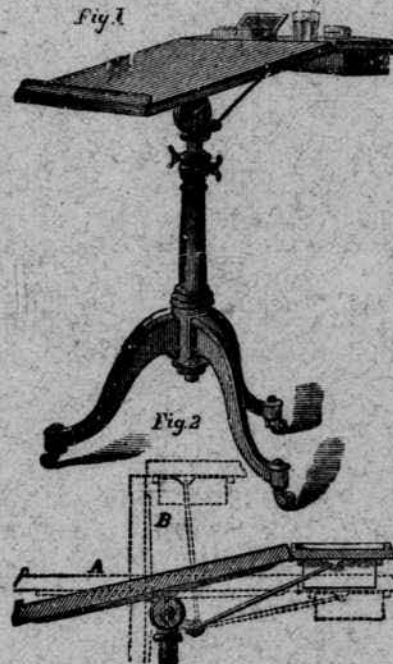
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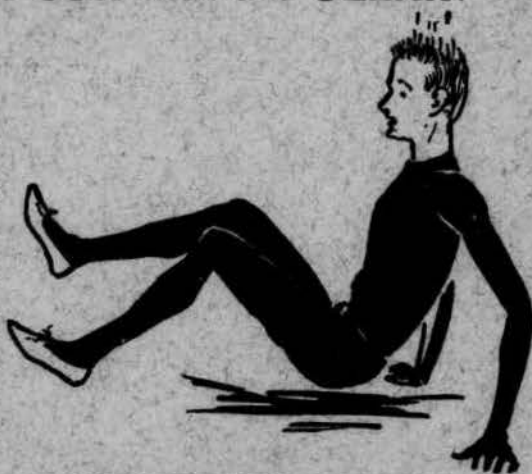
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