

The

W. P. I.



Vol. VII.

Thursday, Oct. 15, 1891.

No. 5.

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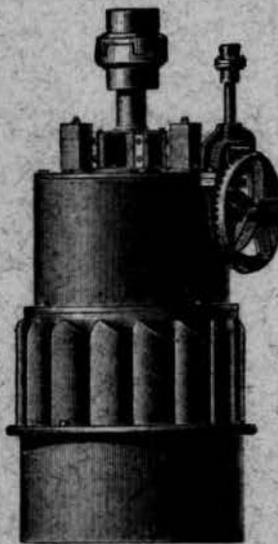
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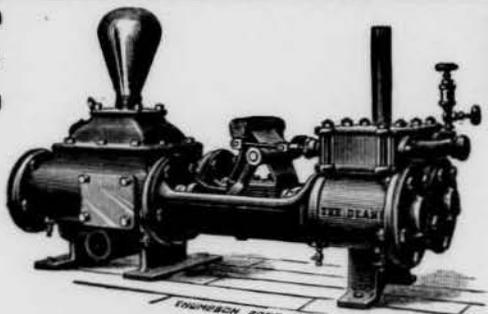
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THE W P I

Vol. VII.

WORCESTER, OCTOBER 15, 1891.

No. 5.

THE W P I.

Published on the 15th of each Month, during the School Year, and devoted to the interests of the Worcester Polytechnic Institute.

BOARD OF EDITORS.

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M. J. LYDEN, '92. | F. E. HAMMOND, '92.
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Remittances should be made to the Business Manager. Exchanges should be addressed: The W P I, Worcester Polytechnic Institute, Worcester, Mass. Communications with regard to all other matters should be directed to the Editor-in-Chief.

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ANY editorial change in the management of a college paper mid-way in the editorial year is not to be looked upon as conducive to that paper's highest usefulness. Circumstances unavoidable have led to the change in the editorial management above indicated. It is with regret that we record the late chief's withdrawal from that position, though not from the Board. It is, too, with a feeling of inexperience, that we take up its work, and in the words that have graced the pages of like publications ever since the college paper became a thing of reality, "we make our bow."

One month ago the year's exercises opened at the Institute; to-day its paper extends greeting to the new students

and welcome back to those who have before congratulated themselves with the proud title of a Tech. "The W P I is devoted to the interest of the Institute,"—yes, in all that is for the advancement of our College; to the interest of its students, its faculty, its athletics, to all that, in a broad and rational sense, tends toward its progress and toward the welfare of its men. We mean that through the W P I its readers may feel the pulse and heart-throb of thought and action in our Institute.

Once more the Tech ventures her fortunes in the foot-ball field. Other columns relate our work and success of the month past, but here it is fit that we briefly give our heartiest endorsement to the game. Foot-ball has been, and we believe, is, the autumn game for our Institution. What Tech of a few years ago does not look back with pride upon our victorious eleven! Organized earnest effort won success then, it will do so now. Systematic training will develop our eleven. It has been well begun. Captain Southgate deserves great credit for the way in which he has begun the campaign. He has taken hold with enthusiasm and that too with skill, for the team has shown up finely in the little time afforded it for practice. The strength is all there, a more scientific game especially in

blocking and guarding the man with the ball will be the result of riper experience. Business Manager Smith deserves praise for the prompt way in which his part of the work is being dispatched.

All success then to our team, every man be enthusiastic, and let the "P I" ring out again and again in token of victory and repeated success. We bespeak the support not only of our own men but all who like to witness a good game of foot-ball. Remember the Tech has an eleven and *is in it to stay.*

It gives us pleasure to note changes in the curriculum for the Senior year in the course of civil engineering. The substitution of more extended work in Hydraulics and Graphics in the place of Steam Engineering and Thermo-dynamics in this course is much to be commended. By just the amount of extra time put in those studies, is the value of our education as engineers increased. The shortness of our course seems to preclude the possibility of any electives, and it is essential that the work be placed where it is most needed. We believe this action to be very wise, and to be one that is a step in the right direction, toward progress.

The student who carefully reads the daily papers, will find much therein concerning the doings about Boynton Hall. For instance, full accounts of the foot-ball games. We have in mind the report of the '92-'93 game which a local daily contained. It will bear perusing, and contains much information that must be new to our readers. After giving the arrangement of the two elevens and the

score, the following remarkable statement occurs:—"Ninety-three has already out-classed the Seniors, being much heavier and of greater experience. The Middlers played a plucky game however, and made their opponents play for all they were worth to win."

We always knew that '93 out-classed the Seniors, and that of the two, they both were the heavier, but can't quite understand why '92 gets the pennant when neither class had the good fortune to win.

A little further down, we are told that:—"Tucker made a good run, he *received a touch-down*, and a moment later *picked* a goal." This will bear investigation. If someone has been giving away all these touch-downs that '92 has made, it is time there was trouble. As for the goal, "Tuck" is welcome to all he will pick.

The worst comes however, when in speaking of '94's team, two players are designated as, "Emerson and Cushman, *full men.*"

We publish in another column a communication on English, to which we would call the attention and thought of the W P I reader, be he student or alumnus. While we do not in all respects agree with the views of our contributor, it always gives us pleasure to print the earnest thoughts of men who have been through our course of study and who have the welfare of their Alma Mater sincerely at heart. And this leads us to reiterate the suggestion that has been so oft repeated that it may well be classed in the same category with that New England tree,

immortalized by "The Village Blacksmith." The suggestion above referred to and this editorial are intended for the alumni. Many of you have been connected with the W P I in the past and others, who have not, surely have not forgotten the institution that gave them professional birth. Why, in the name of the college of which you are proud we ask, do you not remember its paper with items, articles, yes, and with subscriptions? The communication and the helpful suggestion from the *Alumnus* should be the rule, not the exception. Will you not remember the W P I with your thought and—your subscription?

It is a bad thing for a paper to have the reputation of being a chronic "kicker" upon any and all matters likely to furnish a good opportunity for such questionable pastime. It is also about as bad for a paper to be blind to abuses that demand a remedy. Following out the spirit expressed in the preceding sentence, we may discover why the former editors of this paper allowed scarcely an opportunity to pass without indulging in rather caustic remarks concerning the condition of the Tech grounds. Only last June, we found occasion to criticize the manner in which that portion of grounds in the vicinity of the sheds, was allowed to become an unsightly nuisance.

On class-day when everything about the Tech was supposed to be arranged in the neatest manner possible, a most highly edifying spectacle presented itself. For perhaps a week before the day set for the tree exercises all the refuse matter that could be begged or stolen was gathered together and dumped upon the

path leading from Boynton Street to Boynton Hall. The result was a most beautiful carpet of imported coal ashes, fringed with good-sized clinkers, hoop-skirts, and charred barrel-staves, while here and there a tomato-can cover gleamed like a star in the milky way. Across this product of a scientific school, visitors were expected to make their way over to where seats had been provided for them. Many were the uncomplimentary expressions uttered against the wretched state of affairs.

It was extremely fortunate that the day was rainy and that the wind was blowing in another direction. For had such not been the case, we should certainly have had an ash storm that would have transformed the several orators into "sheeted ghosts."

This fall with merry hearts we hastened back to study and were confronted by the same old ash heap and its attendant miseries. Some, regardless of the labor exerted in polishing boots, plodded through a three-inch layer of ashes and disappeared from view. Others, and by far the majority of students, diligently set to work and trod down a new and cleaner path under the trees. Now is it not about time something was done in this matter? We have become thoroughly disgusted with hearing the repeated explanation that "nothing is better than an ash-walk." Why not put gravel into the ashes if the latter must be used on the walk to save the contingent expense of carting it away to the designated rubbish heaps throughout the city? If the shop is not rich enough to send its ashes to those dumps and as a last resort has to utilize the walk for this purpose, let

subscription papers be passed around among the students to obtain the requisite amount. If, however, the pecuniary embarrassment and pride of the "powers" will not permit them to listen to either of these propositions let us all hope, lets us all pray that they will allow *our* walk to remain free from shop *débris*.

TO EXCHANGES, STUDENTS AND GRADUATES.

The Board of Editors wish to make up and have bound a complete file of the back numbers of this paper. If any one has copies of the issues we are lacking, we wish they would inform us upon what terms they will dispose of them. Exchanges and all old subscribers, are requested to take note of this, as there is no complete file in the possession, either of the Board or the Institute. The following are the numbers wanted.

All previous to 1887, all the 1887 numbers excepting Feb., Mar., Apr., May, June and Dec., and all of 1888 excepting Jan., Feb., Mar., May, Oct., Nov., and Dec.

Exchanges wishing back numbers of their own papers will please write at once, as we intend to dispose of a large number of old ones which have accumulated. Address the Assistant Editor, W P I, Worcester, Mass.

THE W P I BOARD.

Changes in Method.—New Constitution.

Several years ago the Board of Editors of the W P I adopted a Constitution and made a spasmodic attempt at having some kind of a permanent organization. This constitution was printed in the next issue, and, as far as the Board of to-day is concerned, that was the end of it. Within the experience of the members constituting the present "staff," there has been no such thing as a constitution, regular meetings, officers, or any semblance of an organization, beyond the blind following of a few unwritten laws, to the effect that the Editor-in-Chief and Business Manager shall

be from the Senior Class, the "Local" Editor from the next lower class, and those members of the Board who can get a key, shall have access to the "Editorial room." This was about the sum of it all. Everything was left to the honesty and faithfulness of the individual editors, and everybody's business was nobody's business.

The present Board has endeavored to correct these slipshod methods, and place the paper on a substantial basis. After much discussion and study, a constitution has been adopted, which we hope will stand for a good many months to come.

One of the principal faults in the old method of government, was that when the Senior editors withdrew in March, the remaining editors, with the representative of the Apprentice Class, reorganized and considered themselves an entirely new Board, having no connection with the old one, and on some subjects taking an entirely different attitude. Under the new constitution, it is hoped that the Board will be more permanent in its organization, and that, with a few vacancies, the same Board that prepared the March number, will edit that of April.

For the benefit of the students, and that all may know just how the Board is made up and governed, we give the following outline of the new constitution:

Beginning with the regular meeting in March, the Board shall consist of at least four editors from the Middle, two from the Junior, and one from the Apprentice Class. The Editor-in-Chief and Business Manager shall be elected from the highest class—in the Spring the Middle, in the Fall the Senior. The Business Manager is not expected to do editorial work, and hence the editors are practically three from the upper class. The Editor-in-Chief is president of the Board, and may call meetings at any time. He has the absolute right to reject or accept any articles contributed by the editors or others. The Business Manager shall appoint an Assistant from the class next below him, but the latter shall not be a member of the Board. At the March meeting an Assistant Editor from the class next below that of the Editor-in-Chief shall be elected.

At the regular meeting for September, one more editor from both the Senior and

Middle classes shall be elected, and at the October meeting one from the Junior class.

A three-fourths vote is necessary for election to the Board, and a member may be expelled by the same vote, and by a majority vote if he has been a member less than three months.

The Assistant Editor is Secretary of the Board.

Regular meetings are held at noon on Saturday nearest the 27th of each month, excepting July and August.

Financial losses are divided equally among all members of the Board, and profits as follows: 24% to the Editor-in-chief, 22% to the Business Manager, of which he shall pay at least 3 to his Assistant, 5% to the Assistant Editor, and the remaining 49% among all the other editors, including the Assistant Editor, in proportion to the number of columns furnished during the year.

'94'S RECEPTION BY THE Y.M.C.A.

Few occasions have been more enjoyable or memorable in the career of the average Tech student than the annual reception given by the Y. M. C. A. of the Institute to the incoming class. The reception tendered to the class of '94, on Friday evening, Oct. 2nd, was in every way successful and satisfactory. The old plan of holding these gatherings at the President's house seemed entirely impracticable when it was found that the numbers of the present Junior class had been swelled to over eighty and it was with some misgivings that the officers of the Y. M. C. A. determined to hold this year's reception at the Salisbury Laboratories and to invite all members of the Institute with their lady friends.

Any such distinctively *Tech* gathering, before Commencement time, to which the students could bring their fair friends was certainly an unheard of thing but the evident enjoyment of the two hundred guests who gathered in the spacious rooms at the Laboratories was certainly reassuring to all.

Quite a transformation had been effected in the Mechanical Model Room, by those in charge of decoration, and as one passed beneath the evergreen boughs and festoons of oak and autumn leaves, which adorned the entrance from the corridor, a most pleasing picture presented itself.

Many of the art treasures which Boynton

Hall can boast were there; some nearly hidden by palms, potted plants and the banners of the Institute.

A piano, and furniture kindly loaned by friends completed the furnishing and left nothing lacking to the comfort of those present.

The guests began to arrive about eight o'clock, and were received by President and Mrs. Fuller and by Professor and Mrs. U. W. Cutler.

About an hour and a half was devoted to social enjoyment, and then an address of welcome was made by President Heard supplemented by a few remarks by President Fuller.

A quartet composed of Messrs. Ball, Bracken, Needham and Southgate, discoursed sweet music and created much enthusiasm, as did the whistling solo of Mr. H. B. da Cruz. A banjo trio by A. C. Comins, A. H. Wheeler and H. H. Hill was much enjoyed, and Mr. E. W. Marshall rendered a violin solo with good effect.

After the musical program, refreshments were served, Rebboli being the caterer.

General singing of favorite college songs ended the evening's entertainment and the occasion was voted by all the most successful affair of the kind ever held at the Tech during the Institute year.

Among the members of the faculty were: Prof. A. S. Kimball and wife, Prof. G. H. White and wife, Prof. L. P. Kinnicutt and wife, Prof. J. E. Sinclair and wife, Prof. G. E. Gladwin and wife, and Miss Emma Gladwin, and Mrs. M. P. Higgins.

Among the young ladies present were: Miss Alice Hastings, Miss Anna Brown, Miss Nellie Jerome, Miss Ethel Tillinghast, Miss Gertrude Stowe, Miss Winnie Quinby, Miss Josie Bragg, Miss May Lovell, Miss Emily Smith, Miss Kittie Estabrook, Miss Sarah Barrett, Miss Louise Dodge, Miss Emma Pratt, Miss Sarah Brown, Miss Merrill, Miss Sinclair, Misses Shorey, Miss Poore, Miss Woodruff, Miss Monson, Miss Horton, Miss Harris, Mrs. Ramsdell and the Misses Laird.

The various details of the affair were in charge of the following committees: Decorations, A. C. Higgins, L. C. Smith, C. O. Smith, G. Kuwada, H. Sinclair, and A. D. Butterfield; entertainment, J. A. Derby, G. F. Freed; refreshments, F. E. Hammond, H. L. Cobb.

FOOT-BALL BEGINNINGS.

The first step in our aggressive campaign of foot-ball, was taken, when a meeting of all those interested in that subject, was held in the Chapel, at noon of the second day of school. D. A. Bullard, '93, Foot-ball Manager, called the meeting to order, and stated that he wished those present to organize a Foot-ball Association. Almost nothing was done the year before, and as a result the W P I and the students in general had been complaining during the spring at the inactivity. This organization which it was proposed to form, would be a branch of the Athletic Association; would raise the necessary funds and give the needed backing for the support of an eleven, and would elect directors from the several classes to confer with the Foot-ball Manager and advise him in his work.

Nominations were then received for president, and H. M. Southgate, '92, was unanimously elected. W. N. Stark, '93, was chosen vice-president, and R. C. Cleveland, '93, secretary pro tem. The following are the directors chosen from the several classes:—'92, Alderman; '93, Hopkins; '94, Harris. A call was then made for money, to support the eleven, and nearly a hundred dollars was pledged. It was stated, that all who gave \$2.00 or over, would be entitled to free admission to any games held in Worcester. The directors were further instructed to circulate subscription papers among the members of their respective classes.

About a week later, another meeting was held, and Southgate, '92, was elected Captain of the Institute eleven, and A. H. Smith, '92, Manager in place of Bullard, '93, who left school.

Since then the class series has been played, the Institute eleven picked out, and practice had nearly every night on Dewey's field.

The Athletic Directors voted to omit the regular Fall Handicap meet, thinking it better that everything be put into Foot-ball and a success made of it if possible. For the same reason, the Tennis Association decided to omit the Fall tournament. In short, the whole Institute is enthusiastic over Foot-ball, and it will be a big disappointment if a series of victories for the steel gray and crimson does not result.

THE FOOT-BALL CHAMPIONSHIP '92 AGAIN TO THE FRONT.

The foot-ball championship of the W. P. I. for the fall of 1891, was played off and decided, in two short but interesting battles, fought on Tuesday, Sept. 22, and Thursday, Sept. 24, respectively. As the time was thought to be better employed in coaching a college team, than in prolonged class series, one game between each pair of classes was the schedule arranged; however, as '93 seemed to have received her fill in the first game, but two games were played. Still, as '92 defeated each of the other teams, there was no need of a continuation.

And that the prophets were wise in proclaiming that the series would stir up enthusiasm goes without saying, when we remember the rivalry and college pride exhibited at the Institute's first game.

The teams were as follows:—

'92 vs. '93.

Nelson	left end	Parker
Bartlett	left tackle	Hodgkins
Freed	left guard	Dyer
Wallace	centre	Clapp
Needham	rt. guard	Butterfield
Alderman	rt. tackle	Stark
A. H. Smith	rt. end	Stoddard
Culley	quarter-back	Andrews
Morse	l. half	Cleveland
Southgate	rt. half	Hopkins
Tucker	full-back	Lincoln

This game belonged to the Seniors from the start, and was never once in doubt.

Their heavier rush line used a V continuously and gained at every pass. With the ball within 10 yds. of goal, Southgate went around the end, while the Middlers were looking for the ball in the centre, and the score became 6—0, where it remained till the end of the half.

At the opening of the second half, the ball started on its way to the Middlers' goal, and Tucker soon carried it over, kicking goal.

'92 soon got the ball again and this time it was Morse who distinguished himself with a brilliant run serving a touchdown, which he soon duplicated in an equally brilliant manner, eluding as many as five pairs of eager arms, stretched forth in vain to embrace him. Two unsuccessful attempts at goal kicking followed, and after a few

more squirms the referee called time, and '93 was out of it for the championship.

SCORE 20—0.

'92 now had only to defeat '94, which she did after a very pretty struggle. After waiting over one day to give the juniors a chance to practice, the following teams met in the game which decided the series, and gave '92 another championship to boast of in after years.

'92 vs. '94.

Nelson	left end	Lincoln
Bartlett	left tackle	Eastman
Freed }	left guard	Boyden
Mundin }		
Wallace	centre	Stevens
Needham	rt. guard	Hall
Alderman	rt. tackle	Harris
Smith	rt. end	Cushman
Culley	quarter-back	Burt
Morse	l. half	Allen
Southgate	rt. half	Rollins
Tucker	full-back	Emerson

The Seniors again started in with their V, and in a few minutes Tucker landed the first touchdown. Another series of V's and Southgate got through the line with the cherished pigskin. Both attempts were successful goals, and this ended the scoring.

Very determined work was the characteristic of the second half, but the ball only went one way to be driven back immediately, and both teams were equally unable to score.

SCORE 12—0.

As '92's team had bested Dalzell's training-school team Monday, by a score of 24—0, the Seniors' hats were noticeably close-fitting during the remainder of the week, but resumed their normal size again during the following one.

ENGLISH AT THE W. P. I.

It was with keen interest that the writer read the report of Mr. L. M. Muzzey before the Alumni Association on the Department of Language. Mr. Muzzey seems to have touched the keynote in regard to the proper *method* of teaching language. If it is to be a part of the course of study, it should by all means be taught by native teachers, and conversation should have a large share of the time devoted to it, instead of, as now, none at all.

But the question arises; has the study of language a legitimate place in the curric-

ulum of a purely scientific school such as ours? The objects of all education should be two-fold. First, to prepare the individual for the particular work by which he expects to earn his livelihood; and second, but by no means of lesser importance, to make a man of him. A man in the best sense of the word, a broad-minded, noble-hearted, truth-loving and truth-seeking man; a man who is abreast of the best thought of his time, and is therefore not only a blessing to himself but also to his fellowmen; a man who is able and not afraid to *think* for himself in all the departments of life. The scientific course at the Polytechnic fulfils the first of these conditions perhaps as well as we can expect under "the economic conditions" Mr. Muzzey refers to. Though there are several branches of applied science that should be taught that are entirely overlooked. But towards the second object there seems to have been little or no mature thought given. Indeed, instead of using the scientific trend of mind, that is developed by the student in his profession—all training for the further development of large and modern views of life, an effort is made to bend the truths thus gained to fit the moss-grown notions of our forefathers.

In a course of three and a half years it is utterly impossible to give the student, besides his technical training, what is popularly known as a liberal education. But in the time that is now devoted to obtaining a smattering of German and French Grammar, without the thinking or speaking knowledge of either language; to the memorizing the Constitution of the United States, and the imbibing of partisan notions of politics from short range; to the cursory survey of English Literature, that leaves the mind just where it found it; and even to the study of a couple of the plays of the divine Shakespeare—in this time if properly used could be laid the foundation for a broad and noble manhood, such as the present system does not so much as dream of.

Such a foundation would be laid by a study of the History of Civilization by Henry Thomas Buckle, and would be in the best sense a liberal education. The student in following the great thoughts therein unfolded would realize the bearing that this scientific movement, of which he aims to be a part, has upon the progress of mankind. He

would begin to realize that these laws that he has been studying about are not merely local in their application but that they extend to all things and to all eternity. He would see things in their proper relations to each other and the Universe. Such a study would be in sympathy with the balance of the training at the Institute. It would be as enjoyable as the present system is the contrary. It would broaden out the mind as nothing else could and fit the student to become a factor in the development of mankind, make him in short a *man*. But the benefit would not end here. It would increase the scope of the Institute bringing it up out of the narrow sectarian rut, that is fatal to progress, into the broad open field of modern liberal thought. ALUMNUS, '88.

OUR NEW INSTRUCTORS.

It is certainly worthy of note in our columns that the Board of Instructors of the Institute has received a valuable addition to its numbers with the opening of the new school year. Mr. Leonard Levi Conant, who takes the place left vacant by the withdrawal of Prof. Eaton as Junior Professor of Mathematics, was educated at Phillips Academy, Andover, and at Dartmouth College, graduating from the latter Institution in the class of seventy-nine.

After leaving college, Mr. Conant was Principal of several High Schools in the West, and was at one time Superintendent of Schools in the town of Deadwood, South Dakota.

At a later date, he was called to a Professorship of Mathematics in the Dakota School of Mines at Rapid City, South Dakota, and left this position in 1890 in order to pursue a course of advanced study at Clark University.

Mr. Conant has already shown himself a friend to the students by his kindly interest in their success in sports as well as mathematics, and we wish him all happiness and success in his work at the Institute.

Mr. Joseph Beals, a graduate at the Tech in the class of eighty-five, has returned as instructor in Drawing and Descriptive Geometry. After graduating at the Institute, Mr. Beals returned to his home at Westfield, and was two or three years instructor in Mechanical Drawing at Westfield evening schools.

For about two years and a half he was instructor of Manual Training and Drawing in the Fall River High School.

Mr. Beals stood among the very first in his class, at the Institute, and his memory has been kept green by the beautiful Thesis Drawing which adorns the wall of the Mechanical Drawing Room: an ideal to Middle and Junior struggling with light and shade.

Mr. Eliot F. Rogers who has come among us as assistant in the Chemical Laboratory, is a graduate of Harvard University, having also taken an advanced course in Chemistry at that institution.

Mr. Geo. W. Booth, valedictorian of the class of Ninety-one, has returned as assistant to Professor White in Civil Engineering.

Messrs. F. E. Bradford and A. L. Rice of the same class have returned to take the course in Electrical Engineering and are acting as assistants in the departments of Physics and Mechanics respectively.

Mr. Daniel F. O'Regan, '91, formerly Editor-in-chief of the W P I, is assisting Dr. Moore in the Chemical Laboratory.

'94's NEW MEMBERS.

The class now has its full list, eighty two in number, the largest Junior class in the history of the Institute. Of those entering all but five passed their examinations this June and September. The five expected, successfully underwent the examinations at the time of the admission of the Apprentice Class but deferred entering until September. Fifteen are from this city. The following statistics will serve as an introduction to the new men.

Name.	Age.	Residence.	School.
Allen, C. M.	19	Walpole.	Walpole H. Sch.
Andrews, A. W.	17	Worcester.	High School
Buffington, E. L.	17	Swansen Centre.	High School
Brooks, C. C.	17	Fitchburg.	High School
Haig, M. D.	21	Worcester.	Univ. of Charleston, S. C.
Lincoln, M.	16	Worcester.	Dalzell's School
Lyon, W. S.	18	Worcester.	High School
McFarland, H. B.	22	No. La Moine, Me.	E. Maine Conf. Sem.
Morgan, R. L.	19	Worcester.	Worcester Acad.
Perry, C. F.	25	Worcester.	Cushing Acad.
Proctor, C. A.	19	Spencer.	High School
Scott, W. A.	19	Worcester.	High School
Soars, J. W.	23	Newton.	Private School
Ware, C. P.	19	Bangor, Me.	Andover Acad.
Adams, H. A.	18	Worcester.	High School
Boyd, H. C.	18	Worcester.	High School
Kelton, E. F.	20	E. Hubbardston.	Holden High
Peck, E. W.	22	Stratford, Conn.	Bridgeport High
Pope, H. W.	16	Cordaville.	High School
Stephens, T. S.	20	Providence, R. I.	English Classical
Whitney, H. S.	18	Worcester.	High School
Walker, H. F.	21	Charleston, S. C.	Charleston

Out of the forty-five who presented themselves for examination, about five-ninths were admitted showing that the high attainments required are in no degree lowered. Among the new men there are nine who will pursue Mechanical Engineering, swelling the total number to sixty-two, a large aggregation for accommodation in the Washburn Shops. In the addition to the class there is good foot-ball material which has already been shown in the championship games. That it has acquired some base-ball prizes there is no doubt, as it is said there are four players who bear a good record. These are very welcome and their usefulness will be demonstrated next spring in the class games.

There is musical talent of undoubted ability and with what there is in the Institute it is quite possible to form an orchestra or at least to revive the old Tech Banjo Club. The youngest member is sixteen the oldest twenty-five, and several of intermediate age who will vote this fall. The last consignment of '94 men comprises some bright students and the class as a whole possesses quality as well as quantity. The Political Science Course has its votaries and already five have signified their intention of taking it.

The privilege of presenting a satisfactory certificate from grammar school principals testifying to the applicant's proficiency in history, geography, and arithmetic was inaugurated with this class. This is an excellent idea and does away with the repetition of the study of these branches, thereby permitting more time to be given to the other studies required.

THE SHOP.

New Machinery.—Orders.

The removal of the machinery offered to the Institute by H. H. Bigelow, and the demands made on the capacity of the iron-room by the unusual size of the Junior Class, has necessitated the purchase of a large amount of new machinery for the Shop. This is mostly located at the north end, nearest the Labs., and includes considerable machinery especially for the manufacture of twist drill grinders. There are

already placed in position, four 14-inch engine lathes, 5-ft. bed; one Washburn lathe built by '91; one 20-inch chuck lathe; one Washburn speed lathe; one 24-inch, heavy, Reed lathe, and a Prentice Bros. 20-inch upright drill. There are also ordered, but not yet in position, three more engine lathes, a milling machine, and a heavy turret lathe for special work. One of the engine lathes was given by F. E. Reed & Co., of this city. A new band saw has also been placed in the wood-room.

Since July, orders have been received for more than fifty drill grinders, and over two hundred drawing-stands. Among other orders, is one for a dozen oil-testing machines, from Professor Thurston of Cornell.

The eight elevators ordered last Spring, and set up in Providence, are running successfully. Two elevators are being rebuilt for parties in Jacksonville, Fla. A freight and passenger elevator for parties in New Britain, have been ordered, and also a lift for lowering hot wire into water.

A long run passenger elevator is being set up in Newark, N. J. This is the first elevator put in by the Washburn Shops, to be run by an electric pump. The motor is a Thomson-Houston motor, and the pump in connection with it, is a Gould triplex. This is especially interesting to Tech students, as the pump was principally designed by Roscoe H. Aldrich, '84, who is superintendent of the Goulds Mfg. Co., Seneca Falls, N. Y. G. H. Cushing, '84, is manager of the same concern, and among other Tech graduates there are, Johnson, '84; Moorehouse and Smithwick, '86; and Sawyer, '89.

The Shop has also just built a first-class rock-drill, for 12-inch holes, and with another one being built, will have three in good condition.

The office has been enlarged by moving the partition farther into the iron-room, and the inside newly painted and touched up.

The blacksmith shop has been excused from playing the part of a store-room; the old floor has been torn up, and one of concrete laid in its place. A new forge has also been added to its equipment.

ELM PARK.

There is probably not one student here who is not acquainted in one way or another with this park. We are brought into contact with it mainly through searching for subjects for the sketch-book. But this reason alone has not induced us to seek its precincts. What one of us has not gone there to enjoy the quiet surroundings, the pretty views and the beautiful flowers and beds of blossoms?

This plot of ground was a peat meadow less than fifteen years ago, but with the growing need for a park it has been developed into its present attractive appearance. Then a mere marsh, now an elegant park; a greater contrast in so short a time would be hard to conceive. At first there were no miniature lakes but these were necessary and from time to time ponds have been excavated, forming a continuous chain extending the entire length of the grounds. A coped wall forming a narrow path surrounds the ponds and these with the fountains, the islands with their heavy growths of shrubbery, have produced a most charming result.

The bridges embodying some fine rustic designs have added not a little to the excellent effect of the general appearance of the park. Broad walks flanked with thickly foliated trees afford a pleasant stroll, and seats at frequent intervals admit of rest, and become especially inviting with their cool luxurious shades on our exceedingly warm days. It is, in a sort of wild beauty, so nature-like in its great number of trees, yet artificial in its winding miniature lakes, one of the prettiest developed regions set apart by any city for a park.

Elm Park has been maltreated. We see it misrepresented in the sketches and we hear it exaggerated as a place of questionable reputation, especially after dark. The bridges are the chief models and the way they are drawn is a caution, all out of proportion. Views of islands and glimpses of parts of the grounds are sights to behold, a favorite in particular, wherein there are two or three islands with a crane standing on a rock would hardly be taken for a portion of this beautiful resort, but, "This is Elm Park" in the corner of the page insures one's recognizing the subject.

The public opinion is far below par for

the place has been rendered notorious by unfavorable newspaper reports. But can there be one member of this honorable Institute who has caused the pretty name of Elm Park to receive an undesirable repute? No, decidedly not. There may be those who resort to this common with malicious intent but it cannot be said of the Tech.

If it increases in its own peculiar style of beauty as it has for the past few years, the public may expect very nearly a perfect Paradise. Now it is quite generally appreciated and in the course of time with its rapidly improving growth it will be a universal resort during the summer. Most any time along at present, a student can be found quietly studying under some shady tree; and in the winter there are many who take advantage of the neighboring ice. So the "Tech" is more than ordinarily interested in its progress and there is not one who is not thankful for the proximity of Elm Park to the Institute.

ACADEMY FOOT-BALL GAME.

On Saturday, Oct. 3, the team chosen to represent the Institute on the foot-ball field, went up on Providence hill to battle with the Academy team and those of the W. P. I. students who failed to see this contest, missed the most interesting game the Tech has been concerned in for many a year. At about 3.30 o'clock a motley array of P. I. men lined up at one end of the Academy campus, and then began a series of college yells of encouragement, such as is seldom heard in the quiet old town of Worcester, and which can only remind one of the palmy old foot-ball days of the Institute, when Lake, Patterson, White, etc., showed the youngsters of the vicinity how the game should be played.

This is by no means intended to convey the impression that good playing was supplanted by an inferior article, for the boys lacked but one thing to enable them to simply outclass their opponents, namely, scientific team work.

Time and time again would a brilliant run be cut short by an Academy rusher, who found the Tech man entirely unsupported. That is one big weakness of our team and should be remedied at once, if we are to expect to win, and that is just what we are going to expect.

Blocking and scientific dodging make up a great part of the game as it is now played, and Capt. Southgate should practice his men on that point as much as possible. However, as a whole, we have not fault but encouragement for the Institute team as selected this fall, and we expect to see such work as occurred in the last half of Saturday's game, repeated, when we run our heads against crack college teams.

Again, as an especial point, the wedge was beautifully worked, and worked to great advantage each time.

The Academy team of this fall is heavier and better than ever before, and is especially strong in team work; our weak point. Whenever they ran with the ball there was sure to be two or three rushers blocking the man and thus putting the ball nearer the goal by 10 yards than one man could have done.

The game began at 3.45 o'clock with the ball in Tech hands, and the following teams lined up:—

ACADEMY.	TECHS.
Waring	left end Stoddard.
Brooks	l. tackle Bartlett.
A. Durand	l. guard Burdick.
C. Mitchell	centre Stevens.
E. Durand	r. guard Butterfield.
Ware	r. tackle Alderman.
Murdock	r. end Hopkins.
Raycroft	quarter back Chase.
Cook	left half Allen.
Dennison	rt. half Southgate.
V. Mitchell	full back Tucker.

The Tech team opened the game with a wedge and a good gain, but lost the ball, and immediately the boys on the east side hill began to gain ground steadily and surely. Tucker punted, and it went into Academy territory, but by a series of short runs by Mitchell and Cook it again neared the Tech goal.

Here a bad mistake occurred on the part of the Techs, Mitchell punted in goal, and a Tech man ought easily to have fallen on the ball, but astonishment seemed to have overtaken the backs, and Waring got there first. Mitchell failed to kick goal. After several exchanged yells of defiance and lots of short range bruising, Durand and Mitchell began a series of Lake rushes, and although our pets rallied and held them for a moment, wedges told and another touchdown was scored for W. A. Mitchell had another case of poor eyesight, and again the

Techs went to work. Here Tucker made a splendid run of 30 yards, but was forced out of bounds; he then punted, but Cook and Mitchell again put on steam and, aided by the same old telling stroke, blocking, the third and last touchdown for the Academy team, was scored.

Then came another heart-rending attempt at goal kicking by V. Mitchell with the usual result.

The rest of the half was short, and the students of both sides soon crowded the arena, the Academy adherents jubilant at the work of their team, while Tech men were gritting their teeth and preparing to sup on crow.

But when at the opening of the second half the Academy wedges were all quickly broken and the ball stopped in its onward career, the old "Polly-wolly-tech!" whooped out in a manner that could not help but take effect. And how our boys did play! We at least had the advantage of the Academy in one point, namely:—Endurance. Time and again did an Academy V stop to be followed by a W. P. I. similar article, and one with more vim, each time.

Here it was noticeable that neither side seemed able to stop the other from some gain, and whoever had the ball, gained the ground.

Then on a beautiful crisscross pass, Southgate went sliding around the end on a hard run and had gained 30 yards when brought to earth.

A little blocking at this time would have scored a touchdown; but as usual there was none to be seen.

However, Tucker came to our rescue and, circling the enemy's left, he fairly outsped their backs and scored the much-needed touchdown. And then the spectators were allowed to see a goal kicked.

With the score 12 to 6 against us, wedge after wedge was worked and again that pigskin approached the goal post, guarded by big Mitchell.

And then occurred the neat trick of the day, and the one which broke the hearts of the juvenile rushers from across the city.

The ball was passed to Southgate who was tackled and made a beautiful pass to Stoddard who was following him up in an attempt to block him. This was so cleverly taken that before the Academy team real-

ized what had been done, "Stod" was sprinting across the field as fast as he could carry himself with Waring after him. Although handicapped by carrying the ball, Stoddard was only downed when within 10 yards of the Academy goal. It was a fine day's work for Waring as well as a foxy game for Stoddard, and the grounds re-echoed again and again with the "P. I.," the "Polly-wolly," and the "Mac-Duff Rats!" answered defiantly by the Rah! Rah! W! A!

Here occurred a disgraceful and babyish action of Capt. Rayeroft, in refusing to play the game out, because he claimed a forward pass from Southgate to Stoddard. The referee was certainly in the best position to decide and his decision was backed by most disinterested spectators.

It was very clear to all parties that an element of fear, and the knowledge that Mitchell was tired, worked much toward Rayeroft's decision.

There were ten minutes left, the Techs' ball, within 10 yards of goal; and the Tech team playing by far the stronger game, and in better condition physically for the wedge which was sure to push the ball over again. After waiting for the Academy team to proceed with the game, Referee Stearns awarded the game to the W. P. I., and a most sure chance of the score becoming a tie on a goal being kicked by Tucker, which is very safe to reckon on, was here made unnecessary.

Then came Bedlam itself, and for a time it seemed as if a clan struggle was imminent, but happily it was averted, and each side was satisfied to cheer its team although it did seem a little like sour grapes to the W. A. to raise a flag on the dormitory in celebration of such a downright case of childishness. The Tech men however were fully cognizant of the fact that a W. P. I. team had at last met and bested a team from the Academy; and a line was formed of about 300 men, not one half of them being Techs, and headed by the foot-ball team marched down to the Union Depot inside of which the famous George W—— was rendered in its usual taking manner. Up Front St., we then wended our way, and the Soldiers' Monument being duly captured, Annie (the immortal) was resuscitated and sung in a touching tone.

All the notes and a few words of Homeward Bound also contributed to the good work accompanied by a doleful chant to the time of foot treadings on the pavement, which sounded like *Acad'my! G't left! Acad'my! G't left!* etc.

At the City Hall, Chairman Morse dismissed the members of the faculty, and then the mob broke up to go home and tell their parents or boarding-mistresses that at last the Academy team had been met with a good showing on the side of Boynton Hall and that once again Worcester had been allowed to enjoy a music festival, second to none in the world.

A LETTER FROM ONE OF THE W P I'S PARENTS.

My Dear Sir:

Your note of this date, enclosing a bill for the "W P I" came duly to hand. I have had some correspondence about this bill every year since 1888, I believe, and I have come to expect it regularly, by this time. A long time ago I was an editor of the paper—in fact, Mr. J. B. Chittenden and I were its *parents*, in a certain sense, and we worked hard to get it on its feet. We succeeded, and Mr. Chittenden received his due share of the profits of the paper for the first year. "On the other hand," I graduated a few months after the paper was well under way, and as there were then no assets available, my share of the proceeds was zero. Now, in consideration of my work in building up the paper, I have felt that I am at least entitled to a single copy of each issue. The editorial boards immediately succeeding me recognized this, and sent me the paper without my asking for it, and one of them even went so far as to elect me a sort of "complimentary editor," or honorable member of the Board. The \$3.60 is a small item, of course, but my objection has been made on general principles. All the other editors have received something by way of compensation, except Mr. J. G. Aldrich and myself. I have never subscribed to the paper, and have repeatedly said that if the Board is not grateful enough to send it to me free of charge, they might cross my name off the list. None of them have done

so. I am always glad to receive the paper. I believe in it, naturally, and I should miss it if it did not come; but it is not essential to me, of course.

I have offered to exchange the little paper that I edit now, and have also offered to write for you, provided you could select, or approve of, some subject in my line. I wrote a series of articles once, on "Least Squares," and the boys seemed to think I was the very devil incarnate to perpetrate such a thing on the simple-minded youths who wanted to read guys on the Professors, or appeals for gymnasiums, or "kicks" of any kind, but who had no use for "Least Squares." So I was discouraged somewhat, and should hesitate a little about writing anything more that in my opinion might be useful. It strikes me that it is a little absurd for students at the "Tech" to object to a little mathematics that any High School scholar ought to understand readily enough. If I had sent an article on Green's theorem, or on Lamé's function, or something of that kind, I think a grand "kick" would be the only proper reception for it.

Meanwhile, let that bill start in on another lap. If it is tired from running so long, as you suggest, give it a little fluid extract of coca and pull up its belt a notch or two. And if you decide to continue the paper, please frame this letter so that subsequent boards of editors can refer to it readily, and not give me the trouble of writing it all over again next year; for I have spent \$3.60 worth of time on it already.

Yours, very truly,

A. D. RISTEEN,

P. O. Drawer 8, Hartford, Conn.

THE ALDEN ENGINE.

The Mechanical Laboratory is visited every change of hours by many students interested in the work of putting together the new Alden Triple-Expansion Engine. The castings and various parts have recently arrived from the Builders' Iron Foundry of Providence, which has held the contract for the construction of this interesting addition to our engine equipment.

The engine was designed by Prof. Alden, and has been under way some over a year.

The first drawing furnished a thesis for David R. Collier, '90, whose motion drawing of its triple-expansion cylinders is an

object of much interest, now preserved in the mechanical model room.

The engine is upright, triple-expansion, and can be run either condensing or non-condensing. It will probably be run experimentally in both ways. The high pressure cylinder has a diameter of 6 inches and a 9-inch stroke, and the other two have respectively 8 and 14-inch diameters, and both have a 12-inch stroke. Perhaps the most interesting feature is the series of reheating chambers between each pair of cylinders. The steam in its passage from one cylinder to the next goes through a chamber surrounded with small brass tubes through which steam at a high temperature circulates, forming in fact a steam coil. The steam which acts on the piston is thus prevented from condensing and much energy is saved. The principle is not new but it has met with but little application in practice and its working effects will be studied with not a little interest.

Vol. II. Transactions of American Society of Mechanical Engineers contains an account of its application in a modified form to the "Superior," an engine built by I. P. Morris & Co. of Philadelphia for the Calumet and Hecla Mine.

Prof. Alden's engine has an estimated horse-power of about 50 though it will probably run higher. The fly-wheel is 4 feet diameter and 10 inch face. A ball governor is used. The cylinders are being tapped for indicators in a number of places so that cards can be studied to the greatest advantage. Both as increased power for the Laboratories and as a means of mechanical research the new engine will be of great value to the Institute.

The Laboratories are also furnished with a new 50 horse-power Stewart fire tube boiler, built by the Stewart Boiler Co. of this city.

COMMUNICATION.

TO THE EDITOR OF THE W P I:—

To many of us the reception given by the Y. M. C. A. to the class of '94 was a pleasant surprise. Not that these occasions have ever proved otherwise than enjoyable or that anything but a success should have been anticipated, but to see a social gathering of any kind within Tech walls, at the beginning of the year is, of itself, a natu-

ral surprise. It is safe to say that no such gathering of students, with their lady friends, was ever held at the Tech at this time of the year, and unostentatiously as the whole plan was arranged and executed, the result proved it a most happy thought.

It seems to have been given up as inevitable, at times, that "Tech life" should consist of recitations six days out of seven in which fraternal feelings are supposed to be cultivated, and love and loyalty to our some day Alma Mater inculcated, along with Mechanics and Calculus; that whatever enjoyment a student of the Institute may have should be gotten in connection with other institutions and associations in connection with which he may have happened to be thrown. In other words, that "College life and spirit" which is recognized by intelligent people generally as forming so valuable a part of a young man's higher education should (as far as we are concerned) be a "nonentity." I do not find fault with the length, number or nature of our recitations, but should there not be something more?

The good, hearty enthusiasm which has been shown for foot-ball this fall is a hopeful indication for the future and let us hope that this manly sport will not suffer another relapse either through lack of proper support by the students or by frowns from the Faculty.

The Junior's Reception was of comparatively little expense and could doubtless be improved upon at second trial, and yet it was enjoyable.

Would it not be well if, during the winter of each year, we could have something of this kind to break the monotony of Tech duties without Tech amusement?

Would not some direct result for good be seen in the daily work?

I am well aware that it would be foolish to try to institute any such festivities as are presided over by Sophomore and Junior classes in the Colleges, but I have one proposition to make which is this—that, instead of waiting till the end of the year to hold its reception, the present Senior class receive their friends on some winter evening in Feb. or March.

It seems to be a foregone conclusion that '92 is to have a class reception, and it seems to me that it would form a much brighter

spot in the history of the class could the affair be held sometime during the dull months of winter than amid the numerous festivities of Commencement time.

Already this season is crowded with dinners, suppers and receptions, and the class officers will doubtless have enough to attend to without trying to make the reception as assured a success as could easily be done at a less busy time.

The reception given by the class of '90 during their Commencement exercises was undoubtedly a success, but it seems to me that could '92 hold hers a little earlier in the course it might be more truly a social affair, and that those who enjoy the dancing could participate much more comfortably and enjoyably. Heretofore, the Middlers' "Half-way Supper" has been the only festive class gathering from Entrance to Commencement, and should we not better appreciate the reception usually held at the end of the year were it given on a cool winter evening rather than on a hot summer afternoon?

H.A.J.L.E.

SALISBURY LABORATORIES.

The physical and chemical laboratories are not only on a par with the various departments of the Institute but constantly tend to outstrip them in the variety of work accomplished and in the system which governs every experiment performed.

In no place is this increasing superiority shown to better advantage than in the electrical department of the physical laboratory. New pieces of apparatus are continually arriving and are put into position as soon as an opportunity for so doing presents itself.

Owing to the slowness with which orders for electrical supplies are filled out by the manufacturers, Prof. Kimbell has not been enabled to do as much as he might otherwise. In fact, electrical goods ordered by him six or eight months ago have not yet been shipped. In some cases after waiting patiently for two or three months, he has received notice that the required apparatus can not be sent owing to some cause or another. Notwithstanding this handicap, the electrical laboratory has become a great factor in the Tech.

A fine tangent galvanometer has been lately set up for Senior and special practice.

This in connection with the apparatus already prepared, is a great aid to those who intend to take up electrical engineering or who have a curiosity to delve deeper into a most absorbing study. The principal difficulty with the work last year, was that it lacked a complete system. This term the laboratory has been almost entirely overhauled; the apparatus disconnected and arranged in a more compact form. Prof. Kimbell gave up the last two weeks of the summer vacation to this work and the results have justified his labors.

In many cases home talent has been brought into requisition when it was found impossible to obtain the necessary pieces from the manufacturers. But a little more time is required to show what degree of perfection may be attained by the conscientious endeavors of an energetic corps of instructors.

But let it not for an instant be imagined that the electrical department has outstripped the chemical in its work. The electrical laboratory is passing through the developing stage, while upstairs a more mature growth is shown. The chemists are slightly in the ascendant by reason of a riper age and more improved facilities. Also much less costly apparatus is required here for an experiment than is needed in the department of electricity. Under the lead of their professors and instructors, the chemists are making excellent progress in their chosen branch.

The Seniors are now engaged in experiments on the determination of nitrogen. They are also bending all their energies in fathoming out the mysteries of Worcester milk, butter, and beer. In short, if present appearances are any criterion of future success, the Salisbury Laboratories may be assured of complete prosperity during the coming years.

DIRECTORY.

The following is a list of the various organizations connected with the Institute, and their make-up for the next Half. Unless otherwise stated, the officers were elected this fall.

SENIOR CLASS ('92).

President, H. M. Southgate; vice-president, G. F. Freed; secretary, F. E. Ham-

mond; treasurer, E. L. Smith; foot-ball captain, C. A. Tucker.

MIDDLE CLASS ('93).

President, A. D. Flinn; vice-president, J. A. Derby; secretary, Nathan Heard; treasurer, W. H. Larkin, Jr.; foot-ball captain, Erastus Hopkins.

JUNIOR CLASS ('94).

President, E. B. Whipple; vice-president, C. B. Allen; secretary, C. G. Harris; treasurer, H. L. Cobb; foot-ball captain, G. O. Rollins.

ATHLETIC ASSOCIATION.

Any student may become a member of this association by paying the admission fee of \$1.

President, F. A. Morse, '92; vice-president, R. C. Cleveland, '93; secretary, E. B. Whipple, '94; treasurer, R. H. Hammond, '93.

Directors. [Elected by the several classes in class meeting. Hold office for one year. The term of office of the first one given in each class expires in January, 1892, that of the second, in September, 1892.]

A. E. Culley, H. M. Southgate, '92; L. W. Rawson, L. P. Strong, '93; E. B. Whipple, J. M. Gallagher, '94.

FOOT-BALL ASSOCIATION.

All students are members. President, H. M. Southgate, '92; vice-president, W. N. Stark, '93; secretary, R. C. Cleveland, '93; manager, A. H. Smith, '92; captain, H. M. Southgate, '92; directors [elected by the Association]: C. E. Alderman, '92; Erastus Hopkins, '93; C. G. Harris, '94.

TENNIS ASSOCIATION.

Any student may become a member, by paying an admission fee of \$1.

President, L. C. Smith, '92; vice-president, H. Sinclair, '93; secretary and treasurer, G. M. Eaton, '94; executive committee, L. C. Smith, '92, J. A. Derby, '93, and A. C. Higgins, '93.

Y. M. C. A.

Officers elected once a year, in January. President, Nathan Heard, '93; vice-president, G. W. Bishop, '94; corresponding secretary, C. E. Goodrich, '93; recording secretary, T. E. Brayton, '92; treasurer, L. C. Smith, '92.

Meets alternately on Tuesday and Wednesday noon, beginning Tuesday, Oct. 6, in room 3, Boynton Hall.

TECH ELECT.

President, A. MacKay, '93; vice-president, N. M. Paull, '93; secretary and treasurer, H. W. Bowen, '93; directors, Prof. Kimball, A. MacKay, '93, F. H. Metcalf, '93, E. W. Peck, '94; ———, '92.

Meets every Tuesday evening in Physics lecture room, Salisbury Laboratories, at 7.30 P. M.

SALISBURY SANITARY ENGINEERING CLUB.

President, F. B. Knight, '92; secretary and treasurer, A. D. Flinn, '93; executive committee, F. B. Knight, '92, E. L. Mundin, '92.

Open to students of all departments but the Mechanical.

CAMERA CLUB.

President, E. H. Keith, '94; vice-president, A. C. Higgins, '93; secretary, E. W. Vaill, '93; treasurer, H. A. Coombs, '93; directors, A. H. Smith, '92, H. W. Bracken, '92, H. Sinclair, '93, E. E. Kent, '93.

HISTORICAL SOCIETY.

President, E. L. Mundin, '92; vice-president, C. H. Andrews, '93; secretary and treasurer, A. H. Smith, '92; executive committee, Prof. Cutler, the officers and T. E. Brayton, '92.

TENNIS ASSOCIATION.

A meeting of the Tennis Association was held Oct. 4, with seven members present. L. C. Smith, '92, president; H. Sinclair, '93, vice-president; G. M. Eaton, '94, secretary and treasurer, were the officers elected. It was voted to appoint a committee of three to consider the advisability of having four dirt courts laid out. L. C. Smith, A. C. Higgins, and J. A. Derby were appointed on this committee.

TECH. ELECTRICAL CLUB.

Edited by the Tech Elect.

Wednesday evening, Sept. 30, members of the Elect met in the library of the Salisbury Laboratories to re-organize and elect officers for the half year. The following were elected: Pres., Alfred MacKay, '93, Vice-Pres., N. M. Paull, '93, Secretary and Treasurer, H. W. Bowen, '93, Assistant Secretary, A. F. Newton, '93. For the Executive Committee, the President of the Club, Dr. Kimball, F. H. Metcalf, '93, Peck, '94, and one (to be elected) from '92.

The object of the Club is to give all students an opportunity to obtain a general knowledge of Electricity, its laws, production and application in daily life.

The Club meets Tuesday evening of each week in the physical lecture room at 7.30 o'clock. Assignments are made by the Executive Committee to members in alphabetical order one week before the meeting. The plan laid out by the Committee is to begin with the first principles of Electricity for the advantage of those just beginning the subject, as well as a review for the others. Assignments will also consist of a review of the electrical magazines. A course of readings is proposed for the future, also visits to the Electric Light Station will be made. All those intending to take the Electrical Course as well as other members of the school, especially Seniors, should come to the meetings and take advantage of these opportunities.

By permission from Dr. Kimball, laboratory apparatus is used for explanation.

Below is a list of topics that have been assigned for the next three meetings.

1st topic: Frictional Electricity, Contact Electricity, Fundamental Experiments with the Electric Pendulum, Unit of Electricity and Law of Attraction.

2nd: Conductors } Non-Conductors.
Dielectrics.

Distribution of Electricity, Density, Tension, Points.

3d: Induction, Gold Leaf Electro-scope, Electrophorus.

4th: Potential (Theory.)

5th: Capacity, Condensers, Leyden Jar.

6th: Frictional Electrical Machine.

7th: Holtz Machine.

8th: Thunder storms.

9th: Experiments.

HISTORICAL CLUB.

At the meeting of the Historical Club, Oct. 10th, there was appointed a committee to consider the revision of the Constitution. Also, a committee on recruiting members, consisting of L. C. Smith, '92, L. P. Strong, '93. The study of English History for the present is to be pursued in connection with a thorough study of Shakespeare. This work cannot fail to be of great benefit, and we sincerely hope a large number of students will avail them-

selves of this opportunity for a wider culture and a clearer insight into the thoughts of the greatest dramatist of the English race. Both Prof. Smith and Prof. Cutler are much interested in the Club and are ready to advance its interests in every way possible. It is an opportunity for study that should be carefully considered by all.

HOW WE PASS OUR MOMENTS.

Scene: Recitation Room, Salisbury Lab.
Class enters.

Prof. θ :—"Well, was there anything today that troubled you?"

(No hands raised.)

Prof. θ :—"How many did the first one?"

(No response.)

"How many the second? (ditto result.)"

"Yes! Well we'll go to the board and see what we can do."

(Class go to the board.)

Prof. θ :—"Now why don't you draw a figure that will help you to see your forces?"

(Draws a figure resembling a warped panorama.) "There, that's it." "No! no! normal to the plane of contact." "Now what is your Σ ." "Yes." Equate your moments and don't waste so many of them doing nothing."

(Interrupted by some one saying "I can't get the answer in the book.")

Prof. θ :—"W-e-l-l. I g-u-e-s-s y-o-u m-a-d-e s-o-m-e m-i-s-t-a-k-e i-n y-o-u-r t-r-i-g-o-n-o-m-e-t-r-i-c-a-l t-r-a-n-s-f-o-r-m-a-t-i-o-n-s!" "The Mechanics is all right."

(Looks at his watch.)

"W-e-l-l, t-i-m-e i-s a-b-o-u-t u-p! If you have it almost done you can finish it. I'll give you out some problems."

(Gives out some so-called problems.)

Prof. θ :—"If you have any time left after doing those, make up some just for amusement."

Here the new assistant accidentally wakes up the professor by saying:—"Yes, integrate three times between limits $i-n$, $i-t$ and you'll find that all terms except the eighty-third and ninety-seventh cancel out. You'll find it all straightforward, and you'll get some answer any way. Besides it is good practice using your calculus."

(Class retires, carrying seven of their number on stretchers.)

And still we wonder at the increase in suicides.

WHERE IS OUR FLAG?

An article appeared in the April number of the W P I, entitled, "Plea for a School Flag." If I am not mistaken, that article aroused, or helped to arouse, our dormant enthusiasm, and a flag was the result.

How many times has that flag been unfurled? It was intended in the above mentioned article, that the flag should be raised every pleasant day, and not simply on holidays. If when the present staff is raised, it leaks around the base, why could not it be fixed in some way so it would not leak? Of course it would make it hard work to have to hoist the staff as well as the flag, but if the staff were up, I do not know how it would be very hard work to run the flag up in the morning, and down at night.

Is it not pleasant, to say the least, to see a spirit of patriotism displayed in a school by flying the stars and stripes, especially when we think that under no other flag could we enjoy the privileges we do?

F. H. METCALF, '93.

SPEARFISH CORRESPONDENCE.

The many friends of "Shorty" the hero of bench No. 9, who last June was the recipient of a "complete sporting outfit," will enjoy reading the following abstracts from a private letter received a short time since.

"I have learned that I owe you a letter. I thought I had paid all my debts before leaving, but I will draw on my banker, Brains & Co. (limited), and send the exchange.

* * * * *

Not as much shooting is done now as formerly, although once in a while, a cowboy has an idea that he is the proper one to run the town.

For the past month I have been in clover, so to speak, for the Normal School is in full sway with its 125 young lady scholars.

* * * * *

Last Saturday night, the 8th Cavalry camped in town, accompanied by Ft. Meade Band, which by the way is considered the third Military Band in the U. S. Both Saturday and Sunday nights they gave open air concerts, and Monday night they tendered a military ball to the ladies of S. It was the best dance I ever attended. All

the officers with the exception of two, were West Pointers, and fine dancers. I learned one thing there, and that is that a girl will follow a person that wears a few brass buttons, in preference to a mere civilian, every time.

* * * * *

So I am living alone, taking my meals at the hotel, and am also 'Mr. C. H. D., Acting Ass't Cashier.' I will tell you one thing that you want to put in your corn-cob and smoke, and that is, that the advice given by my esteemed friend, Horace Greeley, to young America, still holds good, 'that is,' if you want to earn money. Only the other day in letting out some money to the am't of \$90, I made \$13.80, and everything was legitimate too. * * * Regards to all the boys.'"

PERSONALS.

At the August meeting of the American Geological Society in Washington, President Fuller read a paper on "Defloration and deformation of alluvial deposits in New England."

J. Fred Temple, '88, is with the San Francisco Bridge Co., Seattle, Wash.

Harry B. Prindle, '85, has severed his connection with the Thomson-Houston Co. and has become the head of the firm of H. B. Prindle & Co., Manufacturers' Advertising Agency, 53 State St., Boston.

Henry E. Warren, '90, is with John W. Ellis of Woonsocket, R. I.

Chas. E. Wells, '80, is with MacArthur Bros., Contractors, Sullivan, Ill.

Dr. Kinnicutt read two papers before the August meeting of the American Association for the Advancement of Science, in Washington: one on "Fire Clay from Mount Savage," the other on "Purification of Worcester Sewage by Chemical Precipitation." His papers were illustrated by charts and specimens.

W. W. Estes, '84, is instructor in mechanical department of R. I. School of Design, Providence, R. I.

John G. Oliver, '82, has become partner in firm of Bardons & Oliver, general machinists, 1 Water St., Cleveland, Ohio.

Rogers, '91, is with the Silver Spring Bleaching and Dyeing Co., Providence, R. I.

Harry Ramsdell, '91, is with Deane Steam Pump Co., Holyoke.

Chas. A. Pierce, '90, is chemist with the Chicago and Aurora Smelting and Refining Co., Aurora, Ill.

Gerald Alley, '91, is instructor in Manual Training in the Springfield High School.

David Atkins, '91, is with the Harrisburg Machine Co., Harrisburg, Pa.

C. A. Davis, '91, is instructor in Manual Training, Wilmington, Delaware.

Herbert J. Somerset, '91, is draughtsman for the Canadian Pacific R. R., Winnipeg, Man.

At Wiscasset, Me., Sept. 16, were married James D. Hunter, W. P. I. '83, and Miss Anna Cora Tucker of Wiscasset.

A. B. Kimball, '89, is instructor in a manual training school, Brookline, Mass.

From F. W. Treadway, W. P. I. '90, now of Yale University Law School, we have received the announcement of the "Yale Law Journal," the first copy of which will appear in October. Mr. Treadway is one of those who have the new magazine in charge, and the partial list of contributors enclosed, indicate that the "Journal" will be of great value to Yale's Law Department.

The Theses of Messrs. Eddy, Rogers and Bigelow, chemists of '91, are to be published in the Journal of Analytical Chemistry.

Herbert Nichols, '71, has been given the degree of Ph.D. by Clark University. Prof. Nichols is at present in Harvard.

Howard B. Foster, '91, has accepted a position as head draughtsman and mechanical engineer for the National Machine Co., Hartford, Conn.

Reinbold, '91, has gone to work for the Hartford Gas Light Co., Hartford, Conn. Ralph Woodward, '85, is with the same concern.

Chas. T. Tatman, '93, who last Spring served as Local or Assistant Editor upon this paper, has just been admitted to Harvard Law School, and will take there a three years' course. Ever since he entered the Institute, the scientific studies have been distasteful to him, and he finally decided to give them up entirely and study something more agreeable. He was admitted to the

Law School without condition, and on an examination which called principally for Latin, which he dropped fully two years ago, and Blackstone. As but about 50% of the applicants succeed in passing these examinations, the W P I Board are quite well pleased over the results of their influence and the success of their representative. Mr. Tatman was also vice-president of '93, and of the Historical Club. '93, we understand, has retained him for counsel in case of another class-book hubbub. Of course he expects nothing for his services. He is also counsel for the W P I, and it is hoped will bring suits for the foot-ball eleven. We shall miss him very much from the Board, as he furnished the material for our esteemed Business Manager's jokes, and the rest of us now become liable.

But soberly, "Tat" was very popular among the boys, and a hard worker in the interests of class and school. We as fellow editors especially are under obligations to him, and personally and for all his many Tech friends, wish him renewed successes. His present address is No. 37 Trowbridge St., Cambridge.

S. S. E. C.

The weekly meetings of the Salisbury Sanitary Engineering Club will be resumed in the near future. All students will be invited to the first meeting, which will be addressed by Dr. Kinnicutt on the "Webster Electrolysis Process of Sewage Disposal." Dr. Kinnicutt will illustrate his lecture with an experiment on Worcester sewage.

TECHNICALITIES.

Andrews—Bartlett.

"Speak to me orally about it."

Be sure and get meal tickets for room 13.

The tower-clock and the town-pump become slightly mixed at times.

Wanted:—A boy to feed and clean dorgs. Apply at W. M. S.

Communications on dark schemes should be addressed to our *Knight Editor*.

In a primitive industrial community what artisan first appears? Oh!—a Smith.

"Why, N-wt-n here don't know any more than any of the rest of you!"

Do you understand how to enter an excuse in case of absence, etc.?

Is it well to be excused *beforehand* for sickness when you wish to attend the Music Festival?

Secretary Gale of the Local Association addressed the Y. M. C. A. at its noon meeting Sept. 22nd.

Is a pair of tongs an example of the third class of levers? Yes, sugar tongs: Well, coal tongs?

Oct. 12th, the Senior English was pleasantly varied by an exhibition of "photos" by the amateurs of '92.

Where is that Senior choir leader we heard of, the first day in chapel? He is *needed*.

With the Oolah tie and the Tech cut, we bid fair to outshine any gang of convicts in the land.

The old City Hall steps were distinctly heard to say George Washington, after the Academy game had been an hour old.

Those fellows who went to the Y. M. C. A. reception, *sans* girls, almost kicked themselves when they arrived there.

A witty Middler has the following scriptural quotation above his hour plan, "Sufficiency unto the day, is the evil thereof."

A Junior after looking over one of Dr. Kinnicutt's tables, wonders if it is safe to walk on the earth's crust, when it contains 101% of matter.

1st Student—"Thought you went up stairs to change your coat?"

2nd do.—"Well I didn't, I changed my mind."

The Tech is to have a hair cut:—some of our friends who live at the South End wonder if Clark University too has its own peculiar style of capillary *growth*.

Tech '93.—"After I receive my B. S., I expect to go to Cornell and get M. E." Miss Annex.—"So you expect to get ME (me), do you?"

Now that Smith has been elected treasurer of '92, as well as of the Y. M. C. A., why not have him write his name \$mith, and then we can get some idea of which one is meant?

"Say, do you know what he puts me in mind of?" asked one Senior of another as

he gazed in admiration at our genial business-manager. "No, what is it?" "He just resembles ydx."

Doctor Kinnicutt in chapel! At first we thought he wanted to be sure of being included in Y. M. C. A. reception, but he actually came after that was entirely past. Is it possible he has five marks?

The Athletic Committee on the part of the Faculty to confer with the officers of the Association, has been appointed as follows: Prof. Alden, Dr. Kinnicutt, Prof. Conant, and Messrs. Coombs and Beals.

Now Seniors what is the matter with having a class reception about Thanksgiving or Christmas just to show them that '92 can tackle the pigskin or "trip the light fantastic" with equal grace?

A shower bath has been set up in the basement. Good scheme. The foot-ballists will be no longer tempted to squirt water from the faucets all over each other, and the rest of us will not be obliged to buy rubber boots for basement wear.

A bright Tech youth, was this summer at a shore resort, where one of the guests had a dog named Strontian. This B. T. Y. one day remarked that if he had a dog like that, he would name him Strontium and then Barium (bury him.)

It is supposed that the cord or so of blocks, scantlings, beams, rotten timbers, etc. back of the Faculty sheds, west of the shops, are intended for the Seniors' annual bonfire. This supposition is not official, still it goes.

Why could Bartlett or Alderman fasten up a picture better than the rest of the foot-ball team put together? Because a tack-le do it nicely. For satisfaction apply to the Board during office hours.

Now he's bending his back, and
hugging his knees,
While a shadow advances,—retreats;
"Is he crazy" you ask, as he
fingers the keys,
"No. He's learning the method of *Beetz*.

Several members of '91 have asked us to republish our extract from Gen. Walker's speech, which appeared in the July, or Commencement number. This we think hardly feasible, but would call the attention

of those students who have not read it, to the article in question. It will well repay perusal.

In 1895. Visitor—"Who is that young man teaching mechanical drawing?"

Student—"That is the assistant in mechanical drawing."

Visitor—"And who is that young man at the board?"

Student—"Oh! that is the assistant in chemistry. And that is the assistant in civil engineering, and that the assistant in steam-engineering, and that the assistant in shop practice, and that the assistant in physics, while one of the graduating class is going to be made assistant-president."

Visitor—"Why, where are the regular professors, the older instructors?"

Student, puzzled—"Regular professors, older instructors? We don't have any like that now unless you mean John Hurley. He is over in the shop."

THE PUZZLED PROFESSOR.

Scene:—Middle Lecture.

"Why answered not, when first your name was called?"

"I did, so please your Grace, could not you hear?"

"Nay, you did not: I think I know where-of I speak. Can you explain?"

"I fain would not dispute, but since 'tis thrust upon me, again your Grace beseeching, would reply, I think I'm *right* in saying, I was not *heard*."

"Oh, yes: 'tis so indeed, you stand acquitted. If you are right, of course you were not Heard. And yet, you now are heard, how can you still be Wright?"

No, no, yes, yes, no, no, but you are right, and Wright is seldom heard. How, now! what ho,! who are you pray? I truly am confounded. Surely but one explanation is, and that plainly is absurd. Since you are right, as Wright you are, you surely must be Heard."

COLLEGE NOTES.

Cumnock, Harvard, '91, is coaching the University Eleven.

Harvard's class-day orator in '92 will be a Japanese. In '90 the orator was a colored man.

A measurement of the Wellesley girls has shown the average waist measure of the 1,100 students to be 24.2 inches.

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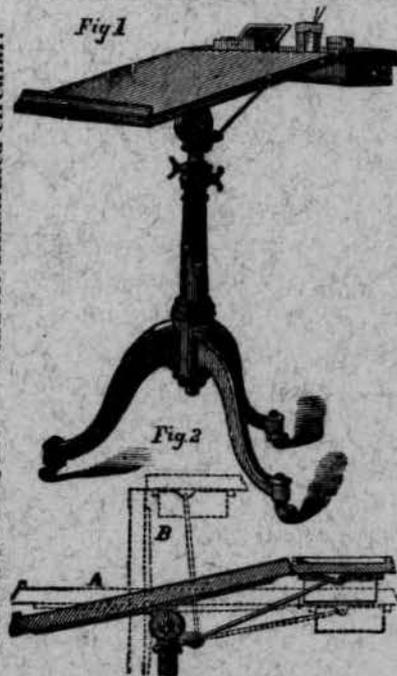
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