

The

# W. P. I.



Vol. XI.

Saturday, November 9, 1895.

No. 9.

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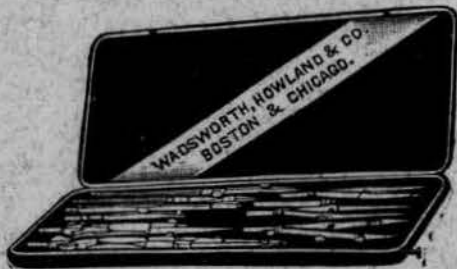
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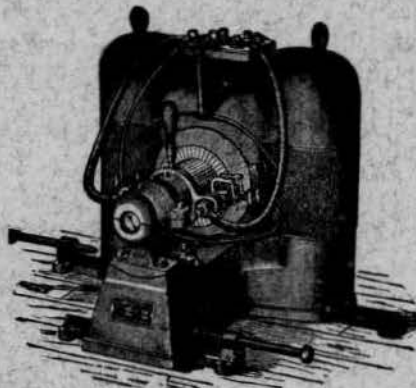
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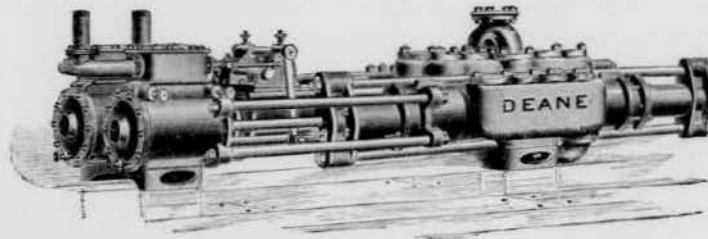
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WORCESTER, NOVEMBER 9, 1895.

No. 9.

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The W P I is published by the students of the Worcester Polytechnic Institute on alternate Saturdays during the Institute year. Items of interest are requested from students and alumni of the Institute. All matter must be accompanied by the name of the writer. Subscribers who do not receive their paper regularly, or who make any change of address, will confer a favor by immediately notifying the Business Manager.

*Subscription Price is \$1.50 Per Annum in advance. Remittance preferred by Money Order or Cash.*

Remittances and communications pertaining to business should be addressed to the Business Manager. Address all other communications to the Editor-in-Chief.

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Entered at the Post-Office in Worcester, Mass., as second-class matter.

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In an issue last year our worthy predecessors advocated a small but important improvement. Nothing was done about the matter last year, and to all appearances the result will be the same for this term. We speak of the need of a railing on the steep path leading to the Washburn Shops.

On a cold winter morning, not to mention the afternoon, it is decidedly uncomfortable to climb this hill. One plods wearily to the top, is almost there, when he loses his footing. The result is damp clothing which must remain on the wearer for five hours at least. The path is steep, and seldom cleared more than once a month while the snow is on the ground. During the night the snow has fallen heavily, and there is no path but the one made by the men themselves. A

poor mortal reaches this hill early enough to report in the Shop on time, if the road were good. But this road is steep and slippery; a sure footing on it is almost impossible.

The top is reached and the climber finds himself wet, uncomfortable, and last but not least, late for Shop. He must work one-quarter of an hour for these few minutes spent in climbing the hill.

So far we have spoken of the students only in this connection, but our remarks hold good for the journeymen as well.

The reply may be made, that there is no need to go up the hill in question, that the path to Boynton Hall is good, and can be used. Our reply to this is in the words of an estimable professor of the Institute: "That's right. Always take the long

way. Walk two miles to get to a point one mile away."

We appeal to the management of the Washburn Shops to correct this evil; for now is the time to do it, and they are the ones to do it. The ground is not yet frozen, and the holes can easily be dug for the posts. A few hours' labor will make an inexpensive fence, which will fill all requirements. It does not seem on the face of it an unreasonable request to make.

In our issue of October twelfth we published a communication from a member of the Senior Class, with regard to Metallurgy. We believe, that the several points touched upon in that letter will bear repetition here, and so we would respectfully call this matter to the attention of those, who have the power to legislate upon it.

Every man in the Senior Class when he entered this institution fully believed that Metallurgy was to be a part of his course. He came here with the expectation of receiving instruction in this important subject.

The Junior year is now a thing of the past and Metallurgy did not fill the place scheduled for it. The hour plan for this term is now well in operation and nothing has been said of Metallurgy. As far as we know, nothing at all at anytime has been said to the Senior Class about this subject. It appears that the class will be graduated entirely ignorant of this important study. We ask, is this right? Is the Institute doing its best for the class of Ninety-Six? But there is another side to this story. Every man of Ninety-Six who does not know something of Metallurgy reflects great discredit to this Institution, something so far unheard of in its history.

Then let instruction in this subject be given the Seniors next term, for apparently that is the only time it can be done.

We are aware of our inability to conduct this paper as it should be, by ourselves. We need the coöperation of the Alumni to a large degree. To this end we have spent much time in writing letters to a large number of our graduates, and so far the replies have been few and far between. Some of the Alumni who have been asked to send us a paper, or some news of any sort, have evidently cast our letter into the waste-

paper basket. Such an indication of utter disregard in the welfare of this paper is far from encouraging to us. True it is, that many men are unable for business or other reasons to comply with our request, but they might at least tell us so. To pay no attention to our letter is hardly what we deserve.

On the other hand, several favorable replies have been received, and we hope for many more. To such men we send our sincere thanks and appreciation of their kindness.

So, gentlemen of the Alumni, help us out. We will try to reach you all by personal letter, but do not wait for that. Send us an account of some Tech's doings. Write us an article on some subject in which you are well versed. Tell us what you think this and that improvement will do; in other words, aid us in editing and raising the standard of your college paper, the W P I.

The game with Tufts College, on October 26th, was certainly a misfortune in many ways. It is not our intention to offer excuses for our defeat. We simply desire to criticise the unfair actions of the management of the football team of Tufts College.

A sympathizer of Tufts acted as umpire in one half and refereed in the other. His decisions were decidedly unfair, but more than that, they were wholly for the benefit of his own team. We are informed on good authority, that he made the statement, that he heard his men call time, and immediately gave it to them. At the same time he said he had not heard the words of our captain, which were easily distinguished by those on the side lines. It seems to us that such a remark, coupled with his outrageous decision in the first half with regard to holding in our line, was not only unfair, but also casts much reflection on the management of the team from Tufts College.

The final results of the cross-country runs are certainly encouraging. Braman deserves much credit, but the Freshman Class ought to be congratulated on its earnest and successful work. This class has from the start taken an interest in all branches of

Tech athletics. It is certainly a bright outlook for our athletics, when the Freshmen take such a lively interest in the Institute. They certainly have some good long-distance runners, and we will be greatly mistaken if more is not heard from them before the year is out.

Then, '99, now that you have started out so well, keep up your enthusiasm, never let it lessen; and thus set a good example for present and future classes.

We take pleasure in announcing to all those interested in the Institute, that on December first, "Echoes of Tech Verse" will be published. This book has been jointly compiled by Francis W. Treadway, '90, and the editor of the W P I. The object is especially to give the Alumni a memento, not only of their class, but of all classes to the present day. To this end the numerous verses, which have been composed by the students since the foundation of the Institute, have been examined. The better verse has been selected and arranged in book form. The book is limited to one hundred pages, which has made it possible to neglect all verse of a character too special.

"Echoes of Tech Verse" is bound attractively in cloth, has a cut of the seal of the Institute on the cover, and will be mailed to any address for one dollar. A circular letter will be sent to the Alumni and students in which more details will be found.

We sincerely hope that this little volume will be well received and fill the place for which it was compiled.

### W. P. I. vs. TUFTS.

#### Tech Defeated by Umpire.

The Tech eleven met defeat at the hands of the Tufts College team, on the Oval, at Lake View, Saturday, Oct. 26, in a most unsatisfactory contest, which throughout was disgusting to both the spectators and the Tech players. The rank injustice and partiality of Umpire Stroud, coupled with the foul playing of several of the visitors' team, was the cause of this feeling; and to the decisions of Stroud alone was due the fact that Tech lost the game. The game was virtually won by Tech; but one touchdown was not allowed by him, as he claimed holding by one of Tech's tackles. The W. P. I. men put up a magnificent game, which was a delight to all members of the Institute who had not

had an opportunity to see the team play since the opening game of the season.

The game was not called until 4 o'clock, as the visiting team did not reach the city until late. Capt. Harris won the toss and gave the ball to Tufts, who kicked to the twenty-yard line. Morse secured the ball and advanced some distance. Worcester tried several end and line plays, but soon lost the ball on downs. Tufts then attacked Tech's centre with little success. Davis gained twenty yards around left end, and by slow but sure degrees forced the ball towards Tech's goal. When three yards from the line, Smith was sent through centre for a touchdown. Butterfield kicked goal.

Score: Tufts, 6; W. P. I., 0. Time, 6 m. 6 s.

Tech kicked to the ten-*yd.* line, where the ball was secured by Eddy and brought back thirty yards. On the third down Tufts was forced to punt. Morse fumbled the punt, which was secured by Harris on Worcester's twenty-*yd.* line. Harris and Morse went at the centre for ten and eight yards. Harris gained ten yards around the end, and Morse five yards more through the centre. Vaughn and Harris netted twenty yards around the ends. Then Morse was sent at Tufts' right tackle. Booth and Ross opened up the line in great shape, and before Tufts realized it Morse was through, and dodging the half and full backs, crossed the line for a touchdown. Here occurred the chief "roast" of the day, for Stroud claimed holding by Booth, and the ball was given to Tufts on her twenty-five-yard line.

Good sharp playing by both sides ensued for the next few minutes, the ball changing hands several times. Tufts finally, when on the forty-yard line, sent Smith around right end. He cleared the end, blocked off the full-backs and it looked like a touchdown, but Goodrich caught him on the eight-yard line and downed him by a magnificent tackle. Tufts then gained four yards. On the next play, Morse broke through the centre and spoiled Sedgwick's pass. Butterfield secured the ball, but was tackled by Booth with a loss of ten yards. Smith in the next play, however, skirted right end and made a touchdown. Butterfield kicked wide in his attempt at goal.

Score: Tufts, 10; W. P. I., 6. Time: 17 m. 52 s.

Hewitt caught the kick-off on the five-yard line, and was tackled by Harrington in his tracks. Tufts made a bluff at a punt but did not gain any ground. Here the first half ended.

Riley, on the kick-off in the second half, sent the ball to Hewitt on the five-yard line, who, by fine running, brought the ball to the forty-yard

line. Davis was sent around the right end for forty yards, aided by great interference. Morse tackled hard and saved a third touchdown. Tufts lost the ball on downs and then Tech went at the game like veterans. Morse and Harris repeatedly made five and ten-yard gains through the line. Tech was given ten yards for off-side play. Goodrich and Vaughn made slight gains around the ends. Harris made twenty yards around left end. Morse then went at the centre four times in succession and carried the ball within a yard of Tufts' goal. Harris then went through Tufts' right goal for a touchdown. Riley kicked goal.

Score: Tufts, 10; W. P. I., 6.

Goodrich secured the ball and brought it back twelve yards. Worcester soon lost the ball on downs and Tufts rushed the ball to Tech's fifteen-yard line. Here a wrangle over the time ensued, but it was decided that a half-minute was left to play. Tufts got the ball on Tech's five-yard line, and here the game ended, with Tufts' third down and the line to gain.

Following is the line-up:

W. P. I.	TUFTS.
Goodrich, l. e.	r. e., Eddy.
Booth, l. t.	r. t., Consen.
Ross, l. g.	r. g., Healey.
Riley, c.	c., Lane.
Perkins, r. g.	l. g., Russell.
Durand, r. t.	l. t., Carpenter.
Harrington, r. e.	l. e., Davis.
Rebboli, q. b.	q. b., Sedgwick.
Harris, l. h. (Capt.)	(Capt.) r. h., Smith.
Vaughn, r. h.	l. h., Butterfield.
Morse, f. b.	f. b., Hewitt.

Touchdowns: Smith, Hewitt, Harris; Goals: Butterfield, Riley.

Score: Tufts, 10; W. P. I., 6.

Umpire, Stroud; Referee, Parks. Time, 25 min. and 15 min. halves.

## CROSS-COUNTRY RUNS.

### Braman wins Second Run.

Friday, Oct. 25, occurred the second cross-country run of the season. The course was from corner of West and Highland streets to Coes square and return. Owing to the repairs which are being made on Highland street, the usual course was changed. At the start the runners followed West street to Elm and thence to the boulevard, instead of continuing along Highland street to the boulevard as formerly. This change made the course somewhat longer, thus accounting for the slow time which was made.

Braman went to the front at the start and was never headed during the entire race. Baker, the winner of the last run, failed to give

Braman the contest that was anticipated, but plodded along about thirty yards behind the leader almost all the way out to the square. Near the turning-point he spurted and gained a little on the leader, but after the turn Braman left him again and gained steadily all the way home. Braman finished first in 27m. 5s.

Whittemore, '98, ran third on the outward trip, but closed up on Baker after the turn. The two ran together until near the finish, when Baker easily drew away from his rival. Ellinwood furnished the surprise of the day by his strong running. He ran behind the three leaders, but still well in advance of the general bunch. No one disputed his claim on fourth place and he came in at an easy pace. Shute made a brilliant spurt at the finish just robbing Wheeler of seventh place.

Out of the twenty-four starters the following finished: Braman, 1; Baker, 2; Whittemore, '98, 3; Ellinwood, 4; Gould, 5; Scott, 6; Shute, 7; Wheeler, 8; Lundgren, 9; Vinal, 10; Whittemore, '99, 11; Traill, 12; Davis, 13; Wilmarth, 14; Smith, 15; Hussey, 16; Fuller, 17; Ferris, 18; Brigham, 19; Walsh, 20.

Ninety-nine again scored the largest number of points, 116; ninety-seven, 57, and ninety-eight, 24.

This makes the total score: ninety-nine, 196; ninety-seven, 148; ninety-eight, 76.

For the individual championship Braman and Baker are tied with 39 points apiece. Whittemore is next with 36 points.

The next run will be to Tatnuck, and the result of it watched with much interest, as the course is so severe that it will tell on the leaders.

### Braman also wins run to Tatnuck.

The last of the series of cross-country runs took place Friday, Nov. 1. Braman, '97, was an easy victor by fully one hundred yards.

Only seventeen starters toed the mark, and they were mostly Freshmen. The race for first place was entirely between Braman and Baker, each of whom had come in first in one of the previous races. At the start Braman went off at a fast clip, but Baker was with him, and the two rapidly left the rest of the crowd. They kept up their fast gait until the "big hill" was reached. Here they encountered some deep mud, which hindered them quite as much as the hill. Braman reached the top some seven or eight yards ahead of Baker, but on the level road the latter soon cut this down to two yards. After the turn the leaders struck a faster pace, aided by the wind on their backs. The third man was a good two hundred yards behind, at this stage of the race, and this distance was steadily increased coming home. Until they reached Newton Square the two leaders were



not three yards apart, and it looked as though the finish would be exciting. Braman, however, had more speed than was thought, for upon reaching the Square he exerted himself to the utmost and almost instantly increased his lead from three yards to forty. Baker tried hard, but was unable to cling to the fast little Ninety-seven man. The latter kept increasing his lead, and when the Fair Grounds were reached he was going at a furious rate. In spite of the fast pace he had set all the way, he now put on a brilliant spurt and crossed the line at a hundred yards' speed. His time was 30m. 45s., which was exceedingly good, considering the condition of the road. The record is 29m. 42s., held by Parker, '93.

Baker came in a hundred yards behind, but still he was about two minutes ahead of Whittemore, the third man. Gould finished fourth, and Scott fifth. The latter did some fine running for such a heavy man.

The rest came in as follows: Ellinwood, Wheeler, Shute, Clark, G. S. Whittemore, Smith, Lundgren, Davis, Wilmarth, Traill, Ferris, Putnam.

The points scored by classes was '99, 121; '97, 65; '98, 18.

The summary of all three runs is as follows:

CLASS.	1st.	2d.	3d.	TOTAL.
'99	80	116	121	317
'98	52	24	18	94
'97	70	78	65	213

Thus the Freshmen have won the banner and they well deserve their victory.

The score for individual men follows:

RUNNERS.	1st.	2d.	3d.	TOTAL.
Braman,	19	20	20	59
Baker,	20	19	19	58
Whittemore, F.W.	18	18	18	54
Scott,	16	15	16	47
Gould,	11	16	17	44
Shute,	14	14	13	41
Wheeler,	12	13	14	39
Lundgren,	17	12	9	38
Ellinwood,	0	17	15	32
Smith, M. A.	10	6	10	26
Whittemore, G. S.	0	10	11	21
Traill,	5	9	6	20
Davis,	4	8	8	20
Wilmarth,	1	7	7	15
Dimick,	15	0	0	15
Merchant,	13	0	0	13
Clark,	0	0	12	12
Vinal,	0	11	0	11
Smith, L.	9	0	0	9
Walsh,	7	1	0	8
Hayes,	8	0	0	8
Ferris,	0	3	5	8
Smith, H.	6	0	0	6
Hussey,	0	5	0	5
Fuller,	0	4	0	4
Putnam,	0	0	4	4
Earle,	3	0	0	3
Brigham,	0	2	0	2
Hastings,	2	0	0	2

## AARON AND LUCRETIA BANCROFT SCHOLARSHIP.

**A Beneficiary Prospers and Returns \$400 to the Fund.**

The following clipping is self-explanatory.

This scholarship was founded in 1885 by the late Hon. George Bancroft, as a memorial to his father and mother, Aaron and Lucretia Bancroft.

By the terms of the deed of gift, Mr. Bancroft conveyed \$10,000 to the City of Worcester, to be held in trust, the income to be "expended in aiding in the liberal education of some one scholar, who, from time to time, shall be selected from the citizens of Worcester by a board of three trustees."

Another clause in the deed of gift provides that while no beneficiary of the fund is to be required to repay the sums that he may have received from it, each beneficiary is charged, if he is prosperous in life, to do his part in increasing the fund.

Those who have from time to time received aid from this fund are George B. Churchill, Charles E. Burbank, Geo. H. Haynes, Lewis T. Reed, Herbert C. Lakin, William H. Morse, Jr., Clarence W. Eastman.

It is thought by the trustees that the following correspondence will be of interest to the citizens of Worcester:

Hon. Edward L. Davis, President of the Trustees of the Bancroft Scholarship Fund: Dear Sir—It gives me pleasure to find myself in a position to return to the Bancroft scholarship fund the sum which I received as the beneficiary for the school year 1891-2.

I enclose my check for the four hundred dollars (\$400), with the hope that this unique bequest with which Mr. Bancroft honored his native city may for many a year continue to be as helpful to some ambitious Worcester student as it has been to myself.

Yours very respectfully,

George H. Haynes.

77 Elm street, Worcester, Mass., Oct. 7, 1895.

Worcester, Mass., Oct. 31, 1895.

George H. Haynes, Esq., Worcester: Dear Sir—In making official acknowledgment of the receipt of your letter of the 7th inst., and the check for \$400 therein contained, the trustees of the scholarship desire to express their appreciation of your voluntary act in complying with the wish of Mr. Bancroft set out in the deed of gift, and to say that you are the first beneficiary who has done so.

If others who have shared with you the advantages of this scholarship should, when able, follow your example, the expectations of the

donor would be fully realized and the fund largely increased.

Yours very truly,  
Edward L. Davis,  
Charles G. Washburn,  
Charles M. Thayer,

Trustees of the Aaron and Læretia Bancroft  
Scholarship.—*Worcester Spy.*

### COMMUNICATIONS.

*To the Editor W P I:*

Between colleges of the so-called "Liberal Arts" and Institutions like ours, there are numerous differences which cannot fail to present themselves. This is particularly true to any one, who is fond of speculating on subjects in general, who has a penchant for comparing what is, with what might be. The bright, particular star of this aggregation of differences, which has chiefly been the means of keeping the writer's wondering apparatus in a state of agitation, is the position, which most of the students take in regard to anything that has the remotest relation to the department of languages and literature.

It is a fact, that many men in the Institute consider the course in modern languages to be simply an unmitigated bore. In a college like Harvard, for instance, it is unnecessary to state that the reverse of this exists. It is evident that the responsibility for this state of affairs lies not with those in charge of this department. Any candid person will admit that the Institute has made, and is making every reasonable effort to make this course commensurate with the excellence of the other departments. Granting this, it is plain that whatever fault there may be, can only be remedied by a change in the attitude of the students. Many of the avowed opposers to this portion of our course, when asked their reason for this sentiment, will answer, "I came here to learn to be an engineer. I don't see what good it will do me to write all these compositions, and learn all this rhetoric, and translate all these goody-goody little fairy stories out of the French and German. I believe it is all a mistake and a waste of time." Now the man who thinks that, *ought* to be an engineer—driving a cart. There is no place in the world where a man can more easily become one-sided than in a technical institution. From the fact that one has chosen this sort of an institution to prepare him for his life-work, it is supposed that his tastes are more mathematical than literary. The systematic training in grappling with hard, dry facts, which he obtains here, is sure death to whatever appreciation he ever possessed of the imaginative and the beautiful, unless he be

unusually careful to guard against such a calamity.

Thus it behooves the student not to neglect the opportunities he now has of obtaining that which, in after years, will be a wonderful help and pleasure to him. Some one has truly said, that every man should have a vocation and an avocation,—a calling and something to call him away from his calling. To no class of men is this more applicable than to the intensely practical men into whom technical graduates develop. Just as by the use of entirely different sets of muscles the body is refreshed, so is the brain rested by a change in the work it is called upon to do. And what could be more novel, and consequently more beneficial to the brain, wearied with grappling with mathematical problems, than some occupation of a literary nature.

I mean by all this, that I believe every man should devote a certain number of hours each day or week to reading standard literature, to writing short sketches of any character whatsoever (if not too deeply logical), to studying the classics, or to the study of modern literature in other languages than our own. Such a man would not only find himself vastly benefited and broadened mentally, but what is of much greater importance, he would get a pleasure out of life, that he entirely misses, who devotes himself unremittingly to the hard and practical side of his profession.

H. C. SMITH.

*Mr. Editor:*

Undoubtedly the quite recent announcement that this year's football season would close with the W. P. I. *vs.* W. A. C. game surprised the greater number of students at the Institute, and perhaps many are still wondering why such a change in football affairs was made. For the benefit of such, I give the following reasons for my action:—

1st. By making the W. A. C. game the last one of the year, I expected to be able to pay the expenses of the team for the season with money which I had cleared on past games, and thereby not be compelled to draw on the treasury of the Athletic Association, or leave the Association in debt.

2d. Owing to the crippled condition of the team and the fact that it was getting late in the year to witness a game, I felt it my duty to close the season, when I could secure the team from undue defeat and the Athletic Association from debt.

3d. Judging from the poor support which the students of the Institute gave the team at the W. P. I. *vs.* Tufts game, I could not possibly see my way clear to pay the Rensselaer

team or the M. A. C. team the guarantees which had been agreed upon.

Before this change was made, I laid my proposition before Dr. Mendenhall and the members of the Faculty Athletic Committee, and with their approval I made the announcement above mentioned. FRED D. CRAWSHAW.

### INSTRUMENT STRINGS.

The manufacture of strings for musical instruments has been carried on from time immemorial in some of the small villages in the Abruzzi. The Neapolitan provinces maintain their superiority in the production of this article. They require the greatest care and dexterity on the part of the workmen. The treble strings are particularly difficult to make, and are made at Naples, probably because the Neapolitan sheep, from their small size and leanness, afford the best raw material. They are made from the small intestines, which must be very carefully scraped. The intestines are then steeped in alkaline leys, clarified with a little alum for four or five days, until well bleached and swollen.

They are next drawn through an open brass thimble, and pressed against it with the nail in order to smooth and equal the surface, after which they are washed, spun or twisted and sulphured during two hours. They are finally polished by friction and dried. Sometimes they are sulphured twice or thrice before being dried, and are polished between horse-hair cords. The strings manufactured in Italy are noted for their strength, transparency, brilliancy and clearness of tone. Their manufacture was introduced into France by a Neapolitan nobleman in 1766, who established a manufactory at Lyons. This industry is carried on in various other towns in Italy; namely, Gobbio, Foligno, Bologna, Venice, Verona and Bassano.—*Leisure Hour.*

### DR. MENDENHALL RETURNS FROM ATLANTA.

Dr. Mendenhall, who was appointed on the Jury of Awards at the Atlanta Exposition, was absent from the Institute about two weeks. He left here Monday, Oct. 14, and at Washington joined the other members of the jury, then they proceeded to Atlanta by special train.

Dr. Mendenhall was very much surprised at the extent of the Exposition, which is located at Piedmont Park. In many respects it was as fine as Chicago, and the illuminations of the World's Fair were fully equalled. He said that the North was not as well represented as he thought it should have been. The Machinery and Electrical Departments were very exten-

sive, and displayed many new features and later developments. The Negro Building showed the rapid progress of the negro in the South. Everything in this building is the production of the negro race. The Fine Arts Building, although not as extensive, would compare very favorably with that at Chicago. Massachusetts has a building which is still under process of construction. The jury was divided into sub-juries of ten or eleven men, each division being assigned to a department. The chairmen of the sub-juries formed a higher jury, which awarded gold medals.

Pres. Mendenhall was chairman of the jury for the Machinery Department, and among those on his jury were Gen. Abbott, U. S. A., Admiral Belknap, U. S. N., Mr. Bissing, U. S. Patent Office, Mr. Chaplin, Chancellor of Washington University at St. Louis, Prof. Richards of Yale College, Prof. Hollis of Harvard College, Mr. Pratt of the firm of Pratt & Whitney, Mr. Brashun, the celebrated telescope maker. Others on the jury were Prof. Adams of the University of Wisconsin, Prof. Newcomb, the well known astronomer, Prof. Rowland of Johns Hopkins University, Thomas Nelson Page, the literary man and author.

While in Atlanta, the Doctor also met Mr. Bryant, '95, who is superintendent of workshops in the Atlanta University.

### PLYMOUTH CHURCH RECEPTION.

On Tuesday evening, October twenty-ninth, the young people of Plymouth Church tendered a reception to the students of the W. P. I. About fifty students from Tech were present and enjoyed a pleasant evening. The first part of the evening was devoted to an informal reception by Dr. McCullagh, assisted by several other members of the society. "To what State do you belong?" afforded a novel way of introducing the ladies of the society, after which ice-cream and cake were served. Dr. McCullagh in a few remarks extended a hearty welcome to all students who had no church home in the city, to attend Plymouth Church. The remainder of the evening was spent in singing college songs.

### RAMBLER.

IT was unfortunate that the home games of the "wights of the leather" did not take place earlier in the season. Nothing arouses a man's interest and enthusiasm, at least Rambler's, as an opportunity to escort one of his young lady friends to a game, and while not engaged in rooting for the crimson and gray, to pour sweet little nothings in her ear during the intervals in

which the impromptu surgeons are binding up dilapidated noses and off-side wrists. Of course it was not possible to get them all here, but a very earnest endeavor should have been made to get at least some of them; for no matter how the gallant Tech may try to wriggle out of it, the fact remains that he has had but two games thus far this season to bring her to. And who can stand on such a record? How am I going to make amends? is the question that confronts every Tech, if he is a Tech and not a grind. Every one would like to see bevies of the fair ones at the Class games, but it is not likely that we shall be thus blest. Rambler sees only one way out of it,—by giving a Junior Promenade. '94 was the last class to give one and it was a big success. The following year '95 deliberately, in cold blood, without the slightest excuse or the least palliating circumstance, decided not to give one. '96 did not consider the matter at all, simply because it was not brought up, it being very easy for such a custom to die out, unless it has taken deep root, when omitted by a class. Now it ought to be revived, there is not a particle of question about it, and it belongs to '97 to take the initiative and have the no mean honor of reviving it. Rambler says take the initiative but not the entire burden, which, however, would be light. If '97 appoints a committee to look into the matter, '96 at its invitation to unite with it in holding a "Prom," would undoubtedly appoint another, and possibly '98 might do the same. The great thing is to overcome inertia. Once it is started and fairly under way, it will run itself, and it will be a comparatively easy matter for '98 to give one next year. Rambler commends it to the hustling men in '97; for it belongs to them to begin and the rest to follow and make it, what it ought to be, the social event of the college course.

A pipe, amber stem, briar; monogram, battle axe, '96, W. P. I. clustered together on a magnificent bowl. Such is the latest conceit of those worthy wights who now style themselves Seniors and have yet to pay their first poll-tax out of their own pockets. Rambler thinks that it is the direct result of a sermon delivered a couple of years ago by a very dear friend. It was just after certain individuals, moved perhaps by a cultured art sentiment and a feeling of the lack of decorative features on the campus, adorned the goal-posts with the wheels of an inoffensive truck-wagon. After assuring his hearers that he was in entire sympathy with their art proclivities and an investigation would not be held because it would be of no use, the speaker drifted to the weed. He closed a pow-

erful exhortation by raising both his arms and exclaiming in a most affecting way, "If you haven't begun, for heaven's sake don't begin!" On going out, everyone, smokers and non-smokers, were supplied with "willies" and made a very imposing cavalcade as they rolled gently down the grand promenade to the foot of Tech Hill. Some mortals work by contraries and the Senior showed at that time his mulish characteristics, and now he accentuates them with a class pipe; but the thought of what a swagger figure he would cut when walking down town with a pipe in his mouth was so enticing that he completely succumbed and ordered a leather case into the bargain. He doubtless dreams of what a comfort it will be to him this winter, when sitting in a rocking chair by the fire his mind ponders over the great problem, How to Graduate. But enough! Discounting the future is unprofitable at best, Rambler simply announces that a briar in its untainted virtue, surmounting a sign which was ripped from a telegraph pole on a country roadside and advertising a well known spirituous elixir, will adorn his den to serve him as a perpetual warning against the follies which latter-day saints are subject to.

Rambler has been rather inclined to believe that a fraternal feeling between students and Faculty was somewhat lacking, but has changed his mind in view of a recent happening. An offer in the class-room on the part of one of the latter to bet a student a thousand dollars can be taken in no other light than that it discloses a very chummy spirit. To facilitate such manifestations of brotherly intercourse and commonness of feeling, it would not be amiss to form a Pooling Association, where such little matters might be registered in due form. Rambler will do his utmost to preserve the amenities and hopes to witness many more such friendly ebullitions.

The fizzle at the Oval a week ago is but a repetition of a similar one last year with the same team under a different name. The Tech captain gave them every opportunity for a game but rightly thought that it was too dreary a day to be played horse with. However, '96 having gathered together its blind, lame and halt, and limbered up a bit, has sent them a challenge. Rambler expects to see the old gentlemen play the game as they used to when boys, and let them have their own rules. Here 's to you '96 for a victory and a turkey supper!

#### SHOP NOTES.

At the time of this issue the Shops are pushed to their utmost capacity. Seldom have they

been so busy, and the outlook is very promising for the future. As their product becomes more widely known each year, the orders increase proportionately.

Lately several shipments of Twist Drill Grinders have been made to England and other foreign countries. During the past two weeks several orders for two or three dozen drawing stands have been received.

The following elevators have recently been installed:

- Two elevators for Cheney Bros., South Manchester, Conn.
- One elevator for Hotel Dorrance, Providence, R. I.
- “ “ “ Wellington Piano Cord Co., Leominster, Mass.
- “ “ “ E. Edwards & Sons, Natick, Mass.

In addition, the Shops have partly completed elevators for the following firms:

- One elevator for Arlington Mills, Lawrence, Mass.
- “ “ “ Hope Webbing Co., Providence, R. I.
- “ “ “ G. G. Paine, Boston, Mass.
- “ “ “ Pacific Print Works, Lawrence, Mass.
- “ “ “ C. A. Cross & Co., Fitchburg, Mass.
- “ “ “ S. M. Russell, Pittsfield, Mass.
- “ “ “ J. W. Dean, Providence, R. I.
- Two elevators for Hutchins Narrow Fabric Co., Springfield, Mass.
- One “ “ Berkshire County Savings Bank, Pittsfield, Mass.
- “ “ “ Mr. Kettell, Boston, Mass.
- “ “ “ Times Building, Pawtucket, R. I.
- “ “ “ Arlington Coöperative Assoc., Lawrence, Mass.
- “ “ “ F. H. Richmond, Providence, R. I.
- “ “ “ Worcester Corset Co., Worcester.
- “ “ “ Pacific Mills, Lawrence, Mass.

**TECHNICALITIES.**

Braman, '97, and Baker, '99, are easily Tech's stars in the cross-countries.

R. S. Riley, '96, led the Y. M. C. A. meeting on October 24th.

Dr. Jennings has announced, to the satisfaction of everyone, that metallurgy will be taken up by the Juniors during the second half. Last year this subject was omitted.

Heat for the Engineering Laboratory has been furnished by the boilers at the Shop till the early part of this week, when one of the boilers in the power-house was started.

The Athletic Directors have elected A. W. Merchant, '97, baseball manager for the coming season.

J. E. Brown, '97, had the misfortune to break his collar-bone during practice before the game with Tufts.

The Y. M. C. A. at Tech have decided not to give the Freshman Class a reception, as has been customary in former years.

The officers of the Tech Camera Club for the present year are J. W. Higgins, '96, president; E. F. Darling, '96, vice-president; J. T. Rood, '98, secretary and treasurer; F. W. Smith, '97, keeper.

Prof.: "What serious mistake has the Government made in coinage?"

Student: "When it coined the two dollar and a half gold piece, which easily passed for a cent."

Prof.: "What effect would an increase in the supply of gold have on interest?"

Student: "Well-er, after the war interest went up if I remember rightly."

Although we said good-bye to the excuse-book nearly two years ago, a Freshman has sought to free his conscience from the effects of a tardiness by entering the following excuse, the originality of which cannot be doubted, in a book at the Shop:

"I took an electric at the usual time, intending to get off at Lincoln Square, but a dense fog prevented my recognizing the place when it was reached, so I was carried beyond."

"Signed, —, —, —."

He will undoubtedly be excused.

**DIED.**

October 22d, at Pueblo, Colorado, Chas. A. Pierce, '90. After graduation, Mr. Pierce went to Kansas City, Mo., but the climate did not agree with him. He then moved to Aurora, Ill., where he remained for one year and a half. He then went to Telluride, Colorado, as an assayist. He left there about a year ago for Pueblo, and while there his old enemy, bronchial trouble, attacked him. The remains of Mr. Pierce were brought to Worcester for interment. Mr. Pierce was unmarried. His mother, Mrs. Caroline A. Pierce, and his sister, Miss Carrie Pierce, survive him.

**ALUMNI NOTES.**

'92. G. F. Freed is Assistant Superintendent of the H. B. Smith Co., of Westfield, Mass.

E. L. Smith is at Purification Works, Worcester.

'94. J. M. Gallagher, formerly Editor-in-Chief of the W P I, is studying at Georgetown University.

**COLLEGE NOTES.**

Figures showing the total number of graduates from Harvard since its founding have been published by the university. The total num-

ber of graduates from the whole university is 19,335. Of these 13,264 were graduated from the academic department, 3,476 from the Medical School, 2,596 from the Law School, 313 from the Scientific School and 528 from the Divinity School. The Athletic Committee this year will be made up as follows: Chairman, Prof. D. H. Beale, of the Law School; Prof. Ira N. Hollis, of the Scientific School; Prof. E. H. Bradford, of the Medical School; graduate members, Perry Trafford, William Hooper and Dr. W. A. Brooks, Jr. The three undergraduate members are to be elected soon by the captains of the athletic teams. Harvard faculty and students have petitioned the Postmaster-General to have the Cambridge Post-Office enlarged. The first organized rush for five years took place on Bloody Monday night. The Freshman class may be suspended from athletics for participating in it. The college is considering the adoption of three grades of marking:—"passed with honor," "passed," and "failed." Harvard will erect a \$50,000 building as a memorial to Phillips Brooks. It will be a home for the religious societies.

President Gilman, of the Johns Hopkins University, has come out in favor of football as the national game of colleges. At a meeting called for the purpose of arousing interest in athletic sports at the university, the president made a long address in favor of athletics and field sports.

Recently, the senior class of Lehigh, in mechanical engineering, took a trip of inspection to Niagara Falls, to see the various methods of utilizing the energy of the falls. On the return a short stop was made at Ithaca, where the extensive shops and laboratories of the Sibley College of Mechanical Engineering at Cornell University were inspected.

At a recent meeting of the Board of Trustees it was voted that hereafter the annual charge for board and tuition in Wellesley should be \$400 instead of \$350, as formerly charged.

Smith has the largest Freshman class in her history—two hundred and sixty-five, and one hundred more are said to have been refused admittance.

A new local secret society has been formed at Trinity. It is the Chi Phi of the Alpha Chi Rho, and its members say that they hope soon to make it a general fraternity.

The University of Chicago has now a faculty numbering 157. Its graduate school is the largest in the country.

A largely filled course in modern novel reading has been instituted at Yale.

A new observatory is being erected for the University of Pennsylvania.

The class of '99, Rose Tech possesses the only married student in that institute.

The faculty at Georgetown University have prohibited football this year.

Before the Revolution only nine colleges were in existence in America. There are now 451.

The University of Michigan has a fraternity which admits both sexes to membership.

Pennsylvania has begun to train the candidates for next year's baseball team.

The University of Pennsylvania has sent a geological expedition to Central Africa.

The students at Brown recently, contributed \$600 to the support of their football team.

The University of Berlin has over 8,000 students.

The Yale-Princeton debate takes place on Dec. 6.

Wellesley is now lighted by electricity.

A basket-ball team has been organized at Yale.

M. I. T. has a course in military engineering.

There are from 1,500 to 2,000 American students in France.

The price of the college paper is added to the term bills at Butler University.

### SCIENTIFIC NOTES.

Chicago's night schools have 40,000 pupils.

The horseless carriage in France is becoming popular.

The thermometer was the invention of Galileo in 1586.

Covered carriages were first used in England in 1580.

Wooden railroads were built in England in 1802; iron rails were first used in 1789; the first iron railroad was laid in America in 1827.

Gunpowder was known to the Chinese 2,000 B. C., to the Hindoos 355 B. C. Its European invention is credited to Roger Bacon about 1281.

The first electric light was the invention of Stalte & Petrie in 1864, but scores of men have since made improvements and adapted it to popular use.

It is announced on the authority of Professor Alexander of the Smithsonian Institution, that an active volcano exists in the Olympic range of mountains in the State of Washington.

Preparations are going on at the quarries at Long Cove, Knox County, Maine, for what will

be the largest blast ever fired in the State. A tunnel, fifty-six feet long, three feet wide and four and one-half feet high, has been drilled into the solid granite, and from it branch out two smaller tunnels, and it is at the end of these two smaller tunnels that the charge of the mammoth blast will be placed. The charge will consist of about eight tons of powder.

The first water-mark used, so far as known, was that of Tate, in 1498. It was an eight-pointed star in a double circle. Fancy prices are now paid for specimens of Tate's paper, and it is suspected that the demand has created a supply and that specimens have been manufactured closely resembling the original.

Pine and fir have long fibers, exceedingly well adapted to the use of the paper-maker, but the resinous substances contained in these woods form so large a percentage of composition and are so difficult of removal, that the paper-makers are compelled to use other varieties.

---

TO THE POWERS THAT BE!

I.

Oh! our noble benefactors,  
 We do thank you for your care  
 In providing us with buildings,  
 Which are beautiful and fair;  
 For their generous equipment,  
 And instructors of rare skill;  
 For our beautiful location,  
 Situated on Tech Hill:  
 Yet for all of those adornments,  
 Which on ev'ry hand we see,  
 There are some things unadjusted,  
 So we venture forth our plea.

II.

We are longing, we are waiting  
 For the happy times to come,  
 When we'll not feel tired and jaded  
 When each long, hard day is done!  
 What we need is a gymnasium,  
 Where *each man* can play a part,  
 Guided by a skilled instructor,  
 Who should aid us from the start;  
 And a field for our athletics,  
 For our men to practice on;  
 'Tis prepost'rous in requiring  
 That they at the Oval run!  
 Thus in giving us these asked for,  
 You would play a double part:  
 First by helping on the experts,  
 And in giving *all* a start.  
 There are dormitories needed,  
 As we've said quite oft before.

You yourselves can but believe it,  
 Then why do you this ignore?  
 And our lunch-room, oh, how dingy  
 For a place, of all the rest,  
 Which should be by far the cleanest,  
 For our dinners to digest!

III.

Yet don't think that we're ungrateful,  
 For thus sending in our plea;  
 All the things that have been mentioned  
 Are much needed, you'll agree.  
 Then why not be up and doing?  
 Let no grass 'neath your feet grow!  
 But by making these improvements,  
 Let each loyal Tech man know  
 You are careful for his welfare,  
 As you must be, we'll allow.

T.

---

TO THE GRIND!

I.

A green young farmer one day  
 Went out to his fields to make hay;  
 But the sun didn't shine  
 So he found out in time  
 That haying when wet does n't pay.

II.

A green young Freshman, one night,  
 Crept into his hole out of sight,  
 And there plugged away,  
 Till the light of next day  
 Came peeping dimly in sight.

III.

This same poor Freshman, they say,  
 Was so tired and dumpish next day,  
 That he made a grand flunk,  
 For he felt as though drunk,  
 And now he thinks grinding don't pay.

T.

---

To shave your face and brush your hair,  
 And then your new best shirt to wear—  
 That's preparation.

And then upon the car to ride  
 A mile or two and walk besides—  
 That's transportation.

And then before the door to smile,  
 To think you'll stay a good long while—  
 That's expectation.

And then to find her not at home,  
 That homeward you will have to roam—  
 That's thunderation.

—Exchange.

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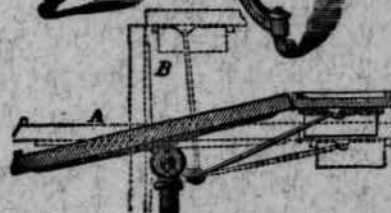
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Fig 1



Fig 2



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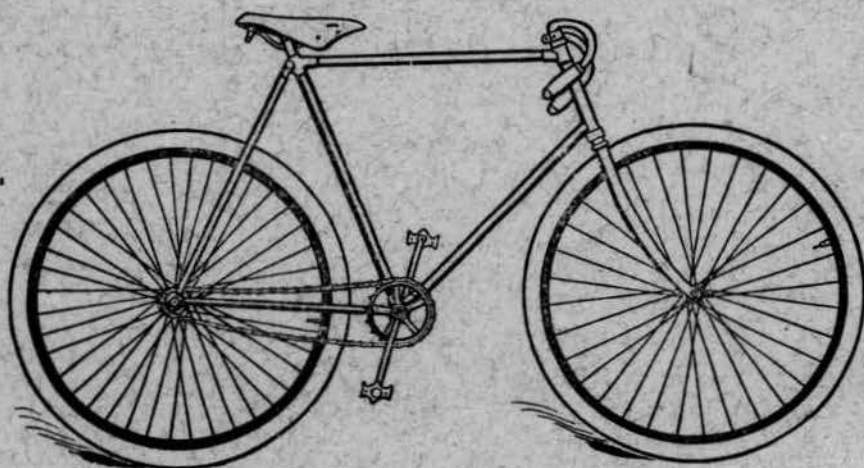
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