



# NOVEMBER

December, '87

PREP



JUNIOR



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B.S.



Illustration of two men in a workshop. One man is working at an anvil with a hammer, while the other stands nearby holding a large tool. The scene is set in a rustic, dark interior with a window and a barrel in the background.

# CONTENTS.

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Editorials .....	41
Theory and Practice .....	43
A Summer Idyl .....	44
Sunday Study .....	45
Horace Mann .....	46
The Tech's Cain .....	49
The Influence of Athletics .....	49
The Thompson Club .....	50
Foot-ball .....	51
Communications .....	52
College News .....	54
Exchanges .....	55
Personals .....	57
Scientific Notes .....	57
Technicalities .....	58

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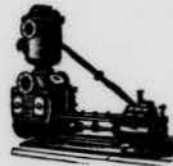
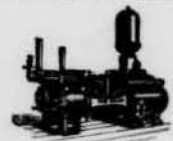
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WORCESTER, DECEMBER 15, 1887.

No. 3.

## THE W P I.

Published on the 15th of each Month, during the School Year,  
by the Students at the Worcester Polytechnic Institute.

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“ONE science only will one genius fit;  
So vast is art, so narrow human wit.”

—Pope.

IN the columns of *Lippincott's Magazine* a series of articles has lately appeared, describing the social life enjoyed by the students at our various colleges throughout the country. These articles have all been written by the undergraduates of the several colleges, and are, therefore, authentic and to be relied upon as a faithful representation of the position of the college student with reference to the enjoyment offered by the pleasures of outside society. We find, in reading these articles, that the universal tendency throughout is toward a closer connection between the dull routine of study and the relaxation of an

evening spent in pleasant and refined society.

There are two distinct lines of advancement to be kept in mind in pursuing a college course. The first is that resulting from purely classical or scientific study, and is the only one, of course, that is laid down in the curriculum. The second is that resulting from contact with outside influences, causing the development of the student into a man, and changing his nature from that of a veritable bookworm into one filled with a refined sense of enjoyment. Either of these lines of advancement is incomplete without the other. It is too frequently the case that the most intellectual men are the bores of society, while the polished and refined gentlemen are apt to be weak minded. Now this state of affairs is precisely what a college course should correct, and the only method is by a proper association of the aforementioned requisites. The confines of a college life may be made very narrow, but we do not believe such should be the case. We dislike to see our colleges graduating men whose minds are stored with valuable information, and yet whose common sense would utterly forsake them at a public reception. Man was designed to be a social being; therefore, in a morbid desire to cram your brain with a too fulsome degree of deep learning, do not wholly lose yourself to the advantageous claims of society.

THE foot ball season of '87,—the most successful one the Tech has ever had—is at an end, and, as we review the list of victories, we may well feel satisfied. In the five games played the eleven has scored 162 points, while their opponents have barely managed to get one touch-down, and that at so late an hour and in such a manner that, although we do not protest the game, we cannot but feel that even that should have been ours with a score of 4 to 0. But even as it now stands the success has been so great, in comparison to that of former years, that we naturally seek for an explanation of it. Was it because our men excelled their opponents in weight and strength? Or was it because they played with teams so weak that it was no glory to have beaten them? To both of these questions we answer no, and we think that any one who saw the last two games will say likewise. Nothing but solid team-work, with a good share of coolness and trickiness, could have caused them to end as they did; and this, of course, implies practice under good leadership. As all Techs know, it is very hard to get time to practice during the week, and, although the Harvard Freshmen may doubt it, three hours a week was the very most the team ever practiced together. Yet so well did they use their time, under Capt. White's direction, that every minute counted. There is no doubt that the team owes much of its success to White. He has taken great interest and pride in it, and has been untiring in his efforts to secure a more "scientific" or modern game. He showed from the start that he was to be

captain, and that is just what a school team of any sort needs; without some discipline it will surely fail.

Another thing which helped the eleven was the support they received from the students in general; in subscribing money to start with; in coming out in good numbers to give them practice before the games, and in still greater numbers to cheer them on to victory when the games were played. The members of the Faculty, too, have been more interested than usual, having subscribed money and attended several of the games.

Perhaps this is the best time and place to express our thanks to Mr. Stephen Salisbury, whose generosity in allowing us the use of his field for practice has been so much appreciated. Practice was necessary; but a place to practice in was just as much so, and in supplying this want Mr. Salisbury gave the team very material assistance.

Last, but not least, Manager Penniman, by his push and energy, has backed his team in a most substantial manner, and to him in no small degree are due our congratulations on the team's success.

Boys, keep this in mind for next year: *Success means a good eleven, with plenty of practice, under a good captain and an energetic manager, and backed by the co-operation of the whole school.*

**BOYS**, do not forget our advertisers. It will pay you to glance at our list before purchasing elsewhere. Remember that they should receive a share of our patronage at least, for their support of the paper is by no means insignificant.

**T**AKE care of your eyes! Almost daily this caution is hurled at us, and yet we believe that a word of emphasis will not be out of place. The eye requires as little care as any member of the human frame, yet what does it get? Just nothing at all in many cases, and in many more serious abuse instead. We recently attended a concert in company with a number of upper-class men, those who had had the opportunity to care for, or abuse their eyesight. As the entertainment went on, one after another made use of a pair of eye-glasses. A lady seated near was heard to remark to her friend that eye-glasses seemed to be all the style. Her friend acquainted her with the fact that the gentlemen in question were Polytechnic students, and added, "The wearing of glasses for the best of reasons is not an uncommon thing among the students at the Institute, indeed, it is quite the contrary." But this need not be so. To be sure the student requires more from his eyes than does the business man, but this does not excuse his abuse of them. Use care and common sense in this matter as in others. "An ounce of prevention is worth a pound of cure" can never be better applied than to this very subject.

**T**HERE is a certain part of the Institute whose precincts, we believe, are scarcely ever invaded by the Faculty or Trustees. We refer to the cellar at the western end of the building. We venture to say that no one having in his hands the power to bring order out of the chaos existing there, could ever enter the place without giving an imperative

order to change its condition. We hardly think that the cellar of the Worcester Polytechnic Institute should to any degree resemble a junk shop. A trifling expense would make a vast improvement in the place.

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#### THEORY AND PRACTICE.

---

**I**N the whole range of study pursued at our numberless institutions of learning, there are no two elements more closely connected, and yet oftentimes found more widely separated, than theory and practice. In a school like ours the fact is more especially noticeable than in most of the colleges; and yet in every college we find these same two principles, which should act together in such perfect harmony, causing much trouble and many failures, where otherwise there would be perfect success, by our failure to recognize their proper relation. This relation may become apparent only after experiment, and, of course, varies greatly according to the individual opinion of the person interested. But the end to be kept in view in arranging a course of study, designed to be in any measure complete, should be such a combination of theory with practice as will best prepare the student for his post-graduate work. It is a fact to be regretted that in many of our colleges the students are rigorously trained in the methods pointed out solely from a theoretical point of view, while the practical, everyday, and common-sense methods are given a mere cursory glance, or in some cases are not referred to at all. Such instruction is obviously wrong and



not in the direction leading from a popular system of education. It is true that theory is the foundation, the solid rock upon which we build our plans, but these plans, when they stand complete, are not purely plans from theory, but plans much modified by practice. The professor who teaches to his classes year after year the pretty demonstrations and the convenient results of unapplied theory, is far behind the progressive professor who makes it a point to bring his classes squarely up against the rough and unformulated realities of actual practice, and sometimes even suffers his theories to be proved impracticable. Students favored with instructors like the latter are receiving the information they most need, and when in their experience they first find their elaborately-worked-out schemes cast back upon them by the practical and business like world, they will stand more firmly than their theoretical brethren, and profit more readily by the experience.

But, in spite of all that can be done to thus mingle these two elements of theory and practice, there still remains the inefficiency, which can only be overmastered by a period of activity, an apprenticeship, as it were, in the atmosphere of a business life. Theoretically a man may be perfectly capable of taking at once such a position as he has been studying for; practically he is not thus capable. It is to eradicate from the student's mind this over-estimation of his present ability that we would seek to impress so forcibly upon him the necessary distinction between theory and practice. Theory is a valuable

thing, but valuable only to him who knows how to use it. And when this knowledge is gained, its fortunate possessor has at his command an element which is more potent in its power of advancement than otherwise the most favorable circumstances would be. Theory and practice are in precisely the same relation to each other as capital and labor; they go hand in hand, the one dependent on the other. As capital wastes without labor, so theory, without the controlling influence of practice, is but visionary and extravagant, the use of which would not hold against the simplest common sense of the average man.

#### A SUMMER IDYL.

SWEET sang the birds that summer day,  
The air was filled with perfumed weather,  
Far from the busy beaten way  
We roamed the groves for hours together.  
Upon the lake's steep-hemmed expanse  
We paddled slowly at our leisure,  
Until, impelled by fate or chance,  
We pulled inshore for change of pleasure.

A rustic seat a log supplied  
(The frowning forest's fallen daughter),  
There snugly seated side by side  
We watched the ripples on the water;  
Ah, happy, fleeting afternoon,  
When shall I e'er see such another!  
Our beating hearts were all in tune  
With earth and heaven and each other.

My fair companion was a child,  
Born of an honest mountain passion,  
Trusting and pure, and unbeguiled  
By the enslaving rule of Fashion;  
Alas! I little thought the day  
I met her romping in the valley,  
That bashful, blithesome, graceful fay  
E'er with my heart could dilly-dally.

But there was something in her style  
That quickly won my approbation,  
Which soon beneath her radiant smile  
Was changed to warmest admiration;  
Her 'witching lips were ruddied o'er  
With nature's rouge that set me wooing,  
But from her eyes I gleaned the store  
That proved to be my heart's undoing.

Stern Lookout Mountain's lofty rise,  
 In the lake's bosom deep reflected,  
 Seemed not so deep as those dark eyes,  
 At times lit up, at times dejected—  
 Those clear, frank windows of the soul,  
 Set firm in virtue's own enamel,  
 Beneath whose curtain lids there stole  
 The glance that did my heart entammel.

The conversation, commonplace,  
 I led aloft to themes redundant,  
 Spoke of the gracefulness of grace  
 And of the fill of the abundant;  
 I harped on geologic lore,  
 I told her of the hills' formation;  
 She smiled, as oft she had before,  
 And said: "My laws, that beats creation."

The day was slipping from our grasp,  
 The evening shades were fast descending;  
 Soon must I lose my manly clasp,  
 Our homeward way we'd soon be wending;  
 Talk of the transitory bliss,  
 Of transit-men when they're in transit—  
 Pd give it all for one sweet kiss  
 From those red lips,—Oh, dare I chance it!

My mind was plunged in sorry doubt—  
 Ah, how I loved that mountain fairy!  
 Just then my caramels gave out  
 And she at once became more wary;  
 Her bosom heaved, her face grew flushed,  
 Her drooping lids began to flicker,—  
 She broke the spell, my spirit crushed,  
 With, "Dear me suzz, I b'lieve I'll snicker."

B.

---

### SUNDAY STUDY.

---

**I**S it right to prepare school lessons on Sunday? Should the pursuit of school duties be entirely given up on that day?

With a view of obtaining the true feeling of the school with regard to this subject, a member of the editorial staff has interviewed a number of students selected at random from the different classes, and it is thought that the results obtained approach very nearly to the average state of things. It is not our purpose to debate here on the merits of the question, but the opinions of the members of the school are

simply presented in the way they were expressed to the writer.

The question, "Do you make use of Sunday in the preparation of school lessons?" or, merely, "Do you study Sunday?" was put to fifty-one men in all. Of this number, thirty-six answered "Yes," and fifteen, "No." Three of the "Noes" said that they had no conscientious scruples against the use of Sunday for the preparation of lessons, but the hour plan was so arranged now that no such study was needed.

The number of affirmative replies was unexpectedly large in proportion to the negative ones. Some men who were supposed to study Saturday afternoon rather than on Sunday, came out strongly in favor of the practice. On the other hand, one or two men whom rumor had charged with doing most of their original work on that day, declared themselves strongly opposed to it.

The student's standing in his class did not seem to be either the cause or the effect of his use of Sunday. It was noticed, however, that those who took the negative side stood about midway in their respective classes, although there was one notable exception. The best scholars, as a rule, acknowledged that part of their success was due to a judicious use of Sunday, and the poorest, too, declared that Sunday was indispensable to them in maintaining their firm hold upon the rear.

It appeared to be the general opinion that if the Saturday half-holiday was employed in the pursuit of pleasure, it would be absolutely necessary to make

up the deficiency on the next day. Saturday night was thought to be a poor night for study, for obvious reasons, and Monday morning didn't offer time enough. There appear to be several men who do this, however, and thus enjoy Saturday afternoon. One man, although he wasn't pressed for an answer, gave the impression that he studied Saturday afternoon rather than sin on Sunday. Of two evils, one should choose the less, and which is the greater: To study on Sunday, or not give the foot-ball eleven the encouragement it should receive from every member of the school?

The reasons given by those in favor of Sunday study were exceedingly varied, and, in many instances, peculiar. A Junior declared in a very emphatic manner, which wouldn't look well in print, that he studied all day Sunday until twelve o'clock at night. We do not dispute this statement, but as the person in question has been heard to express a lively interest in a certain "Sunday-night girl," it is only fair to infer that he had his off-nights. A Senior, high in scholarship and prominent in matters pertaining to the school, said that he thought one day in the week was required by Nature for rest, hence it was his custom to "rest" Saturday afternoon and Sunday morning. Sunday afternoon he studied. Another said that if he didn't study Sunday he would probably go out on the street and get into worse things; his neighborhood was a pretty lively place on Sunday, and he had seen the evil effects of not having anything to do on that day; the tough citizens from

the lower wards come up his way Sunday, and he was determined to be free from their associations. One man said he did more work on Sunday than any other day of the week. Another said he would do almost anything on Sunday that he would on a week day. Two were obliged to study Sunday in order to keep up in their classes. Several thought that school books could be read on that day just as profitably as any literature.

The "W P I" has about sixty exchanges, and here is a good subject for discussion. What is the verdict?

---

HORACE MANN.

1796-1859.

---

AS the observer passes down Warren-ton St., Boston, he will notice upon a modest looking building this sign: "Horace Mann School," and, upon investigation, he will find it to be a school for the instruction of the blind. Is it not true that not only above the door of this school, but also above the portal of every common school in the State, the same sign could be placed with almost equal fitness? Probably there is no one to whom Massachusetts is more indebted for the present high reputation of her public schools, than to the distinguished statesman and educator, Horace Mann. He understood the value and necessity of education the more, because of his own struggles and sacrifices in his youth, when the opportunities for schooling were small. The son of a poor farmer of Franklin, Mass., he was accustomed to hard work from his childhood. Indeed, his schooling until he was fifteen,

was limited to eight or ten weeks a year. In spite of these disadvantages he determined to gain a liberal education. When he was nineteen, a teacher came into town, who was capable of fitting him for college, and within six months' time he took the examinations of Brown University, and entered the Sophomore class. Being entirely dependent upon his own resources, his life in college was a severe struggle with poverty, and, although he graduated first in his class, his health was impaired by the remarkable amount of work that he forced himself to do. He was a tutor in the University for a time, and subsequently studied law.

He was admitted to the Bar in 1823, and immediately attained a high reputation. During his fourteen years' practice, out of the large number of cases which he undertook, in four-fifths of them he was successful. This remarkable record was due, partly to the fact that he would never take a case which he was not firmly persuaded was right, and partly to the clear and convincing way he had of talking to the jury. The people soon selected this brilliant young lawyer to represent them in the Massachusetts legislature, where he served in the House and Senate for ten years. During this time his attention was called to the wretched condition of insane patients, who, as a rule, were kept in miserable dungeons or private institutions, and were cared for in the worst manner possible. He conceived the idea of a State asylum, where they could be kept in comfort, and receive the benefits of medical treatment. By his own untiring efforts he was able to get a bill through the legislature establishing the

State Asylum at Worcester, which institution proved to be so necessary and successful that others were soon built, and the condition of this unfortunate class of people became greatly improved. The subject of education also received much of his attention, and when the legislature established the State Board of Education in 1837, it was considered most fitting that Horace Mann should be appointed Secretary.

The school system at that time was in a bad condition. The children of wealthy parents were sent to private schools, and the common schools being for the poorer classes, were allowed to degenerate; the teachers employed were not well fitted, nor did they have the best materials with which to work. Realizing the importance of the duties of the Secretary of the Board, Horace Mann gave up his lucrative law practice, and accepted the position. He felt that the whole future of Massachusetts depended upon a reform in its school system, and for eleven years he worked fifteen hours a day, giving lectures, and devising and improving existing methods to advance the cause of education. Every year, in all parts of the State, he held institutes, where the school teachers gained new ideas, and became better fitted for their work. During this time he also published a periodical called the "Common School Journal," which embodied all his researches on the subject, including the foreign school-system, to examine which he had visited Europe. It was owing to his efforts that Normal schools for the training of teachers were established. The remarkably efficient school-system in Massachusetts to-day, is due in a

great measure to Horace Mann's work during those eleven years, and he had the satisfaction of knowing, when he resigned the position, that the schools had reached a very high plane and would keep on in their line of advancement.

John Quincy Adams, the great champion of the anti-slavery party, during the session of 1848, suddenly died. This was an important crisis in the history of our nation, for the fight for the extension of slavery was then being hotly waged. The people of Massachusetts looked for one who would carry on the warfare with the same fearlessness and persistence that had distinguished the "Old Man Eloquent." Horace Mann was chosen, and nobly did he fulfil the trust. The South, fearful of losing its power in Congress, was urging the admission of new States with slavery. The future of California and the adjacent States was menaced by this evil, and in 1850, when Webster, influenced by his desire for the Presidency, went over to the enemy, and advocated their admission as slave states, it seemed as though the wrong would conquer; but Horace Mann saw the danger and leaped into the breach, delivering one great speech after another, writing public letters showing the true state of affairs, and criticising Webster's action severely, thus bringing about a reaction in public opinion. This course, however, made many enemies for him in Massachusetts, where Webster was popular, and when the time for election came, they decided to retire him from public life. So they packed the nominating convention, and a clergyman was selected to succeed him. A vital principle was at stake,

and, influenced by this, Mr. Mann, although not nominated by any party, took the stump, and won his own re-election to Congress by a handsome majority. During the six years of his service in Congress he was considered one of the ablest leaders in the House, while his advocacy of plans for the benefit of his fellow-men caused him to be honored everywhere. At the close of his congressional term he was nominated for Governor of Massachusetts. Upon the same day that he was notified of his nomination he was tendered the presidency of Antioch College, at Yellow Springs, Ohio, and he chose the latter as the place in which he could do the most good.

His six years' work as president of the college were years of constant toil. The college was by no means well equipped with buildings or apparatus, and its financial condition was none of the best. But he took hold of the work with zeal, and conquered one difficulty after another to the great benefit of the large numbers of pupils that flocked to the school. He felt that their education was of the greatest importance to themselves and to the country. But the work proved too much for his enfeebled body, and in 1859 he finished his earthly labors. But no one can estimate the influence of his life upon those who had been his pupils, nor upon those with whom he had been associated in his life-work. His one aim was to help his fellow-men upward in every way he could. No promises of wealth or honor were any inducement to him, for he wished to spend all his energies and time in the noble work of educating the common

people. His last words to the graduating class of the college are a fitting epiphany: "Be ashamed to die until you have won some victory for humanity."

---

THE TECH'S CAIN.

---

"ASK lots of questions, and be sure  
That the problems now at hand,  
About hydrodynamic laws,  
You thoroughly understand."

Thus spake the Prof., the other day,  
To the class assembled there,  
When the Senior braves were in the room,  
Though some were in despair.

The problem was to find the flow  
Of water through a hole,  
When  $X$  was the depth of the orifice,  
And the answer was the goal.

One Senior, only, raised his hand,  
And a question asked he:—  
"Whether the origin, otherwise 'O,'  
At the centre should taken be."

Alas, for that inquiring Tech!  
The Prof. at him did stare;  
And finally used the formula,  
 $2S=gt^2$ .

He took the line of quick descent;  
On the Senior he did fall,  
Took moments round his collar-bone,  
And used him as a ball.

The tragedy was quickly o'er,  
And the corpse was carried thence;  
But the Prof., as usual, escaped  
On the plea of self-defence.

"'Tis folly to be wise," 'tis said,  
"When ignorance is bliss."  
Then heed the moral given here  
And learn a thing from this:

"He that asketh shall receive,"  
In chapel we are taught,  
Yet when we would the rule apply,  
We find it comes to naught.

If you assistance should desire  
In any recitation,  
Just keep your questions to yourself;  
Don't ask for information.

THE INFLUENCE OF ATHLETICS.

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THE standard of athletics at the Tech is being raised every year. Many of our field-day records compare favorably with those of the colleges; foot-ball was never more flourishing, and the hearty interest manifested throughout the whole school in athletics in general, speaks well for the future of the "W. P. I." We little realize the influence which such interest in athletics has with the outside world. The people of Worcester are beginning to look upon the "W. P. I." with admiration, and why? Simply because of our activity in just this line of work, in a line of work which better fits us for our regular school duties. We play friendly games of foot-ball with other schools; people become interested in us, learn something of our school, and of the work we do, and thus gradually our reputation is extended. Would this influence be felt were it not for athletics? Surely not. Our past season's work in out-door sports will do more to advertise our school than a whole year's advertisement in any magazine or paper. Who does not know that Yale is champion in foot-ball? Many men will be attracted to the college simply from this knowledge, that they may participate in her sports, and assist in keeping up the standard. The men who take an active part in athletics are generally supposed to be poor students, but this idea has been proven to be false in most cases. It is not true of Yale or Harvard, nor is it true of our own school; on the contrary, the men who are most

active in athletics are usually the strongest in mental ability, and it goes without saying that these men will, at the end of their course, be better prepared to meet life's work than those men who have held themselves aloof from everything pertaining to athletics. It is needless to say that there are exceptions to this rule, but the man who works with moderation in all things is bound to succeed, sooner or later. It is the immoderate man who breaks down.

Therefore, let us all cultivate a spirit of activity. Let us not sit down and see our neighbors do all the work and have all the fun. Let every man take part in the field sports, let him play base-ball, foot-ball, and lawn tennis. Surely, if he shuts himself away from all these pleasures, he will be a most wretched individual. His fellow-students will look upon him almost as upon a stranger among them. Nevertheless, it is his own fault and his own loss. By joining his companions in their daily sports, he would not only benefit himself, but would also encourage them. The more the merrier,—two men cannot play foot-ball very well, they need others to help them, and so it is in every sport; unless all take part and share the work, the best results cannot be obtained.

We are glad to see the Trustees and Faculty of our school manifesting a more active interest in our athletics. They must realize sooner or later that efficient work in the school-room goes hand in hand with healthful out-door exercise, and the sooner they do realize it, the sooner will the standard of health and work be raised.

The progressive educators of our country acknowledge that the time is soon coming when much more stress will be laid upon the importance of athletics than there is at the present day, and when that time does come we venture to say that constitutions will be *made*, not destroyed, by a college course.

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#### THE THOMPSON CLUB.

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THE last meeting of the Thompson Club, held Dec. 3, has not been excelled for interest and instruction since the Club was organized. About 25 members lent dignity to the occasion by their presence, and readily appreciated the many witticisms which were brought out in the course of the debate. The subject under discussion was: "Resolved, That the Darwinian Theory is Correct."

The distinction between evolution and Darwinism was carefully drawn, and the fact of the continually increasing development of man was strongly urged. The weak point in the affirmative argument seemed to be the failure to establish "the missing link" and to make clear the successive steps between the higher forms of animal life and the lowest form of man. This, however, is a point which has puzzled many wiser heads than ours, and indeed may be said to be the chief weak point of all the theories which are advanced for the support of Darwinism.

The Chairman decided for the affirmative on the merits of the debate. This decision was sustained by a rising vote of the Club on the merits of the

question, there being nine affirmatives and five negatives.

The Club is apparently in a flourishing condition, now having 32 members on the roll. We hope it has become a fixture of the Institute.

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FOOT-BALL.

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W. P. I., 4; HARVARD FRESHMEN, 4.

NOVEMBER 19, the Harvard Freshmen eleven came to Worcester and contested for supremacy with the redoubtable Tech eleven. As the *Telegram* said, it was "almost a great victory, but an accident allowed the Harvards to score."

It was a cold, disagreeable day, the rain falling in torrents, making the ground so muddy and slippery that fast running was out of the question. There was very little fumbling of the ball, however, much less than would be expected in such weather. On a fair day, when the fast runners of our team would have had a chance, it is easy to imagine the score augmented by several touch-downs to the Techs' credit. As it was, our team played a rushing game throughout, and in this our half-backs greatly excelled. The Harvard rush-line was slightly the heavier, but the Techs held them, and in many instances broke through and downed the half-backs in fine style. In the first half, especially, Brown, Camp and White repeatedly broke through and downed the opposing backs before they had fairly obtained possession of the ball. At one time Brown alone downed Peckham four successive times in a space of five yards. Our team made their touch-down about twenty-five minutes from the beginning of the second half. Patterson started from the fifty-yard line, went like a flash through the Harvard rushers, entrapped both half-backs into

missing tackle, and was finally downed by a fine tackle by Fitzhugh, only when he had reached a point four yards from Harvard's goal. A touch-down by the same player soon followed, but the try for goal, owing to the condition of the ground and ball, failed. Then Harvard made a brace, and, knowing that they had little time to spare, carried the ball rapidly back up the field. In a scrimmage near the forty-yard line, the referee, Mr. A. B. Higginson, Harvard, '90, exclaimed, "Only half a minute more." The ball was then snapped back and punted by Cushman. Peckham returned the ball and Rice made a fair catch at the twenty-five yard line. At the kick-off Fitzhugh obtained the ball, and by a remarkably long punt sent the ball over our half-backs heads, and it rolled on and on despite the efforts of Hartwell, who had taken Patterson's place, to stop it. Crosby came up at this moment and fell on the ball just as it was rolling over the line, making the coveted touch-down. The referee immediately called time, the "half-minute(?)" having expired. There seems to be no doubt but that the game was played several minutes over time. Following is the game in detail:

*First Half.*—Technology has the ball and the south goal; Camp passes to Jewett, who gains ten yards; Bartlett gets the ball on a fumble and another short gain results; Cushman and Patterson fail to find a hole in the rush-line, and the ball goes to Harvard on the fourth down; short rushes by Peckham and Wild carry the ball to the Techs' fifty-yard line, but here a stand is made, and the ball is Technology's after four downs; the lost ground is soon regained by short rushes by our half-backs and a punt by Cushman; Wild finds an opening and runs twenty yards until he is downed by Cushman; Peckham then punts the ball across



our line, Cushman falls on it and drop kicks from the twenty-five yard line; Patterson gets the return, makes a run of ten yards, but fouls on a pass ahead, and it is Harvard's ball at the thirty-yard line; no gain results after four downs, and Patterson punts; Jewett tackles Fitzhugh just as he starts to run, and it is Harvard's ball in the centre of the field again; Wild makes a good run, but drops the ball, and Allen, obtaining it, runs fifteen yards; Cushman punts to Peckham, and Patterson tackles him; no gain for Harvard; Tech's ball on fourth down, but no gain; Fitzhugh punts, and the ball is Harvard's at the 25-yard line; Camp, Brown and White prevent the Harvard backs from advancing, and a fumble by the quarter-back finally gives the ball to Technology; then our men make a brace, and fine runs by Cushman and Patterson carry the ball into Harvard's territory, and Harvard finally gets the ball at their 25-yard line; their end rushers carry the ball to the centre of the field again; Patterson punts the ball, it bounds off from a Harvard rusher's head, and Cushman, catching it when going at full speed, runs nearly to the 30-yard line; a fumble all around gives the ball to Harvard, and Peckham makes a long punt to our 25-yard line; then it is rushed dangerously near the line, but Cushman relieves the pressure by a good punt to the centre of the field; the ball is now carried first in one direction and then in another, and at the close of the half is in Harvard's territory at the 25-yard line.

At the beginning of the second half Harvard rushed the ball steadily up the field, and within five minutes had reached the Techs' 10-yard line, and a touch-down seemed certain. On four downs, however, the ball went to our team, and Patterson punted; Fitzhugh made a fair catch, but failed to kick a goal; the ball was drop kicked to the

centre of the field, but was soon brought back to the 10-yard line; again Harvard's rushers failed to break through, and Patterson punted the ball to the 40-yard line. Then the desperate rushes of Patterson and Cushman began to tell, and the touch-down followed, the story of which has already been told.

The foot-ball game on Saturday, Dec. 3, resulted as follows: W. P. I., '90, 72; Worcester High School, 0. The game throughout was a rushing one, and the High School boys, though greatly overmatched by their opponents, played a plucky game. Lake and Crosby, as half-backs for the W. P. I., played their positions strongly, while Rice, in his tackling, could hardly have been excelled, he alone downing Dadmun no less than eight times as he tried to run around the end of the rush-line. For the High School, Dadmun and Earle carried off the honors.

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## Communications.

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EDITOR OF THE W P I:

I hope you will permit me through the columns of the "W P I" to express an opinion concerning improvements which I think should be made in our diplomas.

Our institution is no longer burdened with that misnomer, "Free Institute," but stands forth prominently as the "Worcester Polytechnic," a name that immediately suggests the character of the school, and gives it rank and prominence among the principal technical schools of the country. This change in name will of course necessitate a corresponding change in the diplomas presented to succeeding graduating classes.

Judging from opinions expressed by various alumni of the Institute, there seems to be general dissatisfaction with the

so called "sheep-skins" which it awards. Indeed it must be apparent to any intelligent person that the general appearance of the diplomas of the Institute does not come up to the standard of other schools. Bearing this fact in mind and also the relative value of our degree when compared with the same degree from other schools, is it unreasonable to expect a decided change in the diplomas of the next graduating class, a change which, like the new name, will put our standard on a par with that of our equals, and moreover, be entirely satisfactory to those most interested—to the graduates? A diploma in itself, to be sure, amounts to but little; nevertheless, with us, it represents three or three and a half years of hard work, and if we can, at the end of this time, have something more than a mere amateur production to remind us of our accomplishments and to introduce us to the outside world, does it not stand to reason that the average student will be a great deal better satisfied than he is at present?

In saying what I have, I of course do not overlook the fact that the diplomas of past years have been awarded gratis. If the Institute is not able, financially, to supply us with a better grade of diplomas, let it adopt the custom of most of the colleges, that is, have each student pay for his diploma; then of course we could expect a genuine sheep-skin, and one large enough and elaborate enough to adorn the study of any graduate of the Worcester Polytechnic Institute.

The opinions here expressed are substantially those of many other members of the school, and if they will in any way direct the Board of Trustees in adopting a new diploma for succeeding years, they will have accomplished their aim.

SENIOR.

MR. EDITOR:

To every thoughtful student the question often comes, whether or not he is

making the best possible use of his time. The answer to this question may depend entirely upon his own conscientiousness in his work, but it may also depend, in no small degree, upon the character of the course laid out for him by his instructors.

The question which occurs to me, and which prompts this article, is, "Is our course in English such as to give us the best results for the time consumed?"

As the course has been marked out for us, it consists of a study of literature, through a study of authors in the first half of the year, and of civil government in the latter half. All well and good. The plan in general is all right. How does it work in detail?

The work in literature so far has consisted—first, in the copying by the class of two lectures on the general subjects of English Literature and the English Language; second, in the study of the age of Dr. Johnson; and third, in the study of the age of Shakespeare.

In studying the age of Johnson, a critical review of Goldsmith's "Traveller" was attempted. Each allusion to extraneous matter, whether historical, political, geographical or what-not, was made the subject of a separate essay. Thus, as the Traveller abounds in allusions of all kinds, several weeks were consumed with that sort of work, till, finally, it was a query whether we were studying literature for itself, or in order to learn geography, history and a multitude of other branches of knowledge.

What earthly use is it, so far as the study of literature is concerned, for a man to spend several hours investigating why Goldsmith referred to the river Po as "the wandering Po," or to go into a lengthened description of "Idra's cliffs" or "Arno's shelvy side?" In the annotated edition that was used, all that is necessary for a full understanding of the poem is given in a condensed form, and all the time that was devoted to those investigations could have been spent on

subjects of far more interest and profit, and at the same time pertinent to the study of literature. If we are to study geography or history, why not get some approved text-book, and go at its systematically?

Hudson, in his edition of Shakespeare, has given us some very good advice on this subject. He says: "In truth, average pupils do not need nearly so much of catechizing and explaining as many teachers are apt to suppose. I have known divers cases where the process was carried to a very inordinate and hurtful excess, the matter being all chopped into a fine mince-meat of items; questions and topics being multiplied to the last degree of minuteness and tenuity. Often well-nigh a hundred questions are pressed where there ought not to be more than one or two; the aim being, apparently, to force an *exhaustive* grammatical study of the matter. And exhaustive of the pupil's interest and patience it may well prove to be. This is not studying Shakespeare, but merely using him as an occasion for studying something else. Surely, surely, such a course is not, nor can it come to, good; it is just the way to make pupils loathe the study as an intolerable bore, and wish the Poet had never been born. The thing to be aimed at before all others is, to draw and hold the pupil's mind in immediate contact with the poetry; and such a multitude of mincing questions and comments is just a thick wedge of tiresome obstruction and separation driven in between the two. In my own teaching, my greatest fear commonly is, lest I may strangle and squelch the proper virtue and efficacy of the Poet's lines with my own incontinent catechetical and exegetical babble."

Then, after each individual has gone through the same process with one or more of the other works of the period, comes the examination, in which we are liable to be called upon to explain any of the afore-mentioned allusions, to quote

certain portions of the poem, etc., etc. And here again we would quote from Mr. Hudson:—

"Our educational work proceeds altogether too much by recitations. Our school routine is now a steady stream of these, so that teachers have no time for anything else; the pupils being thus held in a continual process of alternate cramming and disgorgings. As a part and parcel of this recitation system, we must have frequent examinations and exhibitions for a more emphatic marking of our progress. The thing has grown to the height of a monstrous abuse, and is threatening most serious consequences. It is a huge perpetual-motion of forcing and high-pressure; no possible pains being spared to keep the pupils intensely conscious of their proficiency, or of their deficiency, as the case may be: motives of pride, vanity, shame, ambition, rivalry, emulation, are constantly appealed to and stimulated, and the nervous system kept boiling-hot with them."

ENGLISH.

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## College News.

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Three Harvard professors are said to be possible presidents of the new Clark University.

Thirteen foreign countries are represented at Yale this year.

A "Henry George" club has been formed at Cornell.

Women will soon be taken at Princeton.—*Press.*

The Princeton sophomores have issued a printed code of rules to guide the freshmen.

Yale is offering extra prizes to those who will continue training during the coming winter.

Morrison, McClung, Van Inwagen and Cranston, of the Exeter eleven, will enter Yale next year.

The Freshmen have sixteen hours of required work per week, besides required exercise at the gymnasium.—*Yale News*.

The Freshmen at Columbia have voted to wear "Mortar Board" hats and class pins.

An '89 man has already been at seventeen different boarding places during his college course.—*Yale News*.

The college three mile record was broken on November 9, by Harmar, of Yale, who covered the distance in 16 minutes, 5 2-5 seconds.

Few men spend more than \$4,000 during a term at Harvard, and as a rule expenses are lighter than at any other college.—*World*.

The oldest university in the world is the University of Paris, founded in 1200. The College of Mexico is the oldest in America, and was founded fifty years before Harvard.

A new marking system is soon to be inaugurated at Columbia whereby men of high standing will be exempted from examinations.

Of thirty-two young men of New York lately examined for cadetships at West Point only nine were accepted as physically sound. The majority of those rejected are said to have the "cigarette heart."

The Faculty of the Massachusetts Institute of Technology have addressed a circular to the younger alumni asking if they were overworked during their course.

Some of the Yale students are writing novels. The first one was a dime novel, recently published in New York, and the scene of it is laid in New Haven.—*Crimson*.

The gold medal which was offered to the member of the Exeter eleven who should best play his position throughout

the season has been awarded to Harding. Harding will enter Harvard next year.

It costs \$1.50 per year to belong to the Harvard Co-operative Society. The organization has been in existence five years, has a store of its own, and last year did a business amounting to \$37,000.

A grade of seventy per cent., instead of sixty as formerly, will be required to pass examination papers at Cornell. The honor system has also been abolished.

The six seniors who received the highest honors at Yale last year were all athletic men. One was on the nine, another on the eleven, two rowed on the crew and two were sprinters.

It is somewhat probable that Johns Hopkins University will be removed to Clifton, a suburb of Baltimore, in accordance with the wish of its founder. The inducement offered is a permanent sum of \$35,000, for the maintenance of a school of science.—*Ex*.

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## Exchanges.

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The Harvard *Crimson* is very severe on Capt. Beecher of the Yale team for his speech at the Yale Alumni gathering, held the night before the game with Princeton. It will be remembered that Beecher said he expected to "fight the referee as well as Princeton," and he "hoped his team would wallow their opponents in the mud to-morrow." Referring to this the *Crimson* says:

"Such language as this, uttered at a public dinner, leads one to consider whether the conservative element who declare that the moral effect of foot-ball is harmful have not, after all, solid ground for their assertions. The further fact that none of the alumni present arose to object to the language used by Captain Beecher as being unseemly and as evincing a deplorable spirit, might well lend further weight to

the arguments against the game. By their silence all the members of Yale present at that dinner signalled their assent to these bullying and indecorous words."

A writer in the *Beacon* has been reading "She" and "Allan Quartermain," and the gory fights have stirred him up to a high pitch of excitement. Three columns of scathing criticism of Rider Haggard conclude:

"Very soon we shall hear no more of these books. From their very nature they cannot survive long, and the reading public will sink back in relief to the perusal of quieter tales. Yet we must lament the present wide distribution of these stories. They cannot be elevating. They have no moral purpose; they glorify the animal impulses of men and leave almost unnoted the higher nobility of moral attainments. Such unlimited murder and slaughter is a perilous subject for the reading of our youth. Beware! have we not here the dime novel in sheep's clothing."

The *Hanover Monthly* appears this month in a new cover, which is a great improvement over the old. Those editors who fill their columns with all sorts of advice to the world at large should note with profit to themselves the pointed and piquant editorials of the *Monthly*. Here is one:

"One of our exchanges proposes that all college papers answer the question, 'What constitutes a model college paper.' How absurd! You might as well attempt to define a 'gentleman' or a 'good literary style,' or anything else which requires the concatenation of so many diverse qualities. All that can be said of a good college paper is that it is a good college paper. Every one recognizes it when he sees it, but it is by intuition, and not by any formulated idea of what the paper should contain. This is all that can be said upon the matter."

*Student Life* is usually worth reading, but its last issue contains a sketch called "My Little Sister's Grave," that is extremely prejudicial to the fair name

of the paper. It is written in the "kind reader" style, and depicts the remorse of a wicked brother who has teased and tormented his little sister. By the liberal use of asterisks and such expressions as "mound of freshly dug earth," "withered flowers," "a tear trickles down upon my pillow," etc., an attempt at pathos is made which might cause copious weeping in the case of some persons. Witness the closing paragraph:

"The worst came at last. That night I was awakened by my father's voice. Bending over me he told me my little sister was dying. I hastened into the room and found it only too true. The poor little emaciated creature did not recognize me now. \* \* \* How I wished to seek some recognition from those once bright eyes, and to know that she forgave my boyish pranks. I could not speak, but I saw her through my tears as she clasped the neck of father and mother who were kneeling by her side. With a final effort she raised her little head, and, as it sank back upon the pillow, I caught the faint and gasping whisper—'Brother.'"

\* \* \* \* \*

It is the reading of such literature that makes the exchange editor so solemn and morose.

Perhaps "My Little Sister's Grave" was the cause of this, from the *Illini*:

"Undoubtedly, the most tedious, most thankless and least improving part of the work on a college paper is that performed by the Ex. editor. To wade periodically through a mass of commonplace, often trashy, literature (?), only now and then finding anything of real merit or interest, is tiresome in the extreme, and criticism becomes the mere repetition of platitudes, or the utterance of unmeaning abuse. We cannot honestly find fault with any paper that leaves out the exchange department."

The November number of the *Purdue*, an esteemed contemporary from Indiana, is made up largely of clippings from the October number of the

"W P I." We admire the taste shown by its editor, but we regret that his modesty has prevented him from giving the "W P I" credit for his appropriations.

The *Phillips Exeter Lit.* improves with the November number. "Chance" is good poetry.

Two new exchanges are welcomed this month, the *Crank* and the *College World*.

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## Personals.

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The marriage is announced of Mr. Chas. A. Clough, '83, and Miss Jennie Spaulding, of Vineyard Haven, Mass.

L. W. Southgate, '85, formerly head draughtsman with the Pond Machine Tool Company, is now engaged in the patent office at Washington.

Ralph Woodward, '85, is in the electric lighting business in Lynn, Mass.

Harry B. Sawyer, '86, has charge of one hundred and eight (108) students in a manual training school in Washington, D. C.

L. A. Whitney, '86, is with the Simonds Rolling Mill Co. of Fitchburg, Mass.

W. S. Morehouse, '86, has recently accepted a position as draughtsman with the Morgan Spring Co. of this city.

Geo. P. Tucker, '87, is soon to accept a situation as chemist in the Laramie Chemical Works, Laramie, Wyo. Ter., where he will be associated with Stone, '84.

Supt. Higgins, with Mrs. Higgins, recently took a trip to Philadelphia, where Mr. Higgins attended the meeting of the American Institute of Mechanical Engineers.

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## Scientific Notes.

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"Gas hammers" are being introduced into England, and it seems are making considerable headway in competition with the steam hammer.

Professor Dobrowslawin, of St. Petersburg, has been making experiments on the condition of the air and the temperature in theatres lighted by gas and by electricity. His conclusions are all in favor of electricity for lighting purposes.

A short time ago science invaded the hitherto unexplored field of psychical research. Two large volumes have been published, embodying the results of the most careful and conscientious investigation by eminent scientists of the mysteries of mesmerism, mind-reading, dreams, hallucinations and kindred phenomena. The ability to transfer thought from mind to mind, without the aid of what are known as the senses, appears to be fully proven. The author believes that telepathy, as this thought-transference has been christened, is susceptible of a natural explanation, and rejects absolutely the supernatural explanation offered by spiritualism. We all rejoice to see the penetrating light of science flashed into the mystic darkness which has so long favored the shrewd impostors who have played upon popular superstition that they might prey on the public purse.

An interesting and valuable process of preparing organic textile fabrics in such a manner as to enable them to resist the action of molten metal, has lately been devised. The fluid parts of the substance are first removed, powdered carbon is then sprinkled over it, and all the constituents, which would form hydro-carbons, distilled off so slowly as not to disturb the original positions of the particles of the body. Delicate laces may be thus treated and then used as moulds for ornamental castings. A piece of muslin was found to have gained 34.26 per cent. in weight during the carbonization. On analysis it yielded

95 per cent. of carbon and 5 per cent. of a silicious ash. The inventor of the process has been awarded a medal by the Franklin Institute.

An ingenious member of the Engineering Corps has constructed a unique electro-magnet. He has yoked together the trunnions of two Rodman guns and wound them with four miles of condemned torpedo cable. The weight of this magnet exceeds 100,000 lbs. A thirty horse-power dynamo furnishes the magnetizing force to the monster. An armature, six inches in thickness, has been built up of thin plates, and experiments to determine the power of the magnet are in progress. A five ton dynamometer fails to register sufficient force to detach the armature when the magnet is charged to the full capacity of the dynamo. Two miles of cable are to be added and largely increased results are expected.

A paper of great interest to the scientific world has recently been read before the Royal Society by Professor Lockyer. The paper is entitled the "Spectra of Meteorites," and in it Prof. Lockyer attempts to prove that "all self-luminous bodies in celestial space are masses of meteoric vapor produced by heat, brought about by the condensation of meteoric swarms, due to gravity." If this hypothesis be accepted the science of astronomy will have to be reconstructed in a great measure. The distinctions between stars, comets and nebulae are swept away, and the differences in their spectra attributed solely to differences in temperature. Professor Lockyer illustrated his point by heating a meteoric fragment in a vacuum by an electric current. As the temperature rose, the spectrum of the fragment exhibited the changes referred to in the paper. The high position which Professor Lockyer holds in scientific circles will secure for his theory a respectful hearing.

## Technicalities.

Merry Christmas!

Holidays, the 21st!

Was John's title good?

Senior class photos are to be taken by Rice of this city.

The practice of holding class prayer meetings appears to be quite successful.

Wanted: To find something that our learned friend of the Junior class does n't know.

Baylis, '89, recently sustained a severe fracture of his wrist while exercising in the Y. M. C. A. gymnasium.

It is significant that the Harvard *Crimson* contained not the slightest mention of the game with the W. P. I.

Found in the office "the man who whistled in the corridor." He will serve the usual term of thirty minutes.

Why is a Junior like a chair on the platform in the chapel? Because he is seldom sat on by the Profs.

The Middler, after having diligently studied his "shell" on the cover, is now prepared to do a good job in that line.

Student (to Prof.): I don't see thro' that problem.

Prof. (sarcastically): Well, we can't stop to put a window in it for your benefit.

"In sooth, I know not why I am so sad," our funny man remarked as he sat down to grind out this month's jokes.

A new standard ohm has been received by Prof. Kimball from the Cavendish laboratory, Cambridge, England. It is finely mounted, and very accurately adjusted.

Just gaze on the new seal of the Institute on the fly-leaf of the new

hymn books! We suppose that those are the school colors.

We are often amazed at the resources of our language. A professor told us the other day of "an immensely minute animal that multiplied by division."

This notice appeared on the bulletin board the other day: Wanted; my manual in geometry which was stolen by mistake from my pocket. Return to B—, '90.

Will not some benevolent friend of the school, now that we have new hymn books, present us with a suitable instrument for accompaniment, one with real stops?

Dadmun was used pretty roughly in the High School game. His runs around the ends were fraught with many difficulties, but he played a plucky game, notwithstanding.

The Senior chemists have in progress of growth some fine specimens of vegetation in the shape of "the silky moustache." They doubtless think that "in union there is strength."

Wanted by the class of '90—To find the man who dares to say there is a fly on the foot-ball eleven. None but those furnished with undertakers need apply.

Davis, '90, tried to stop the grindstone in the shop the other day. He succeeded in stopping quite a large piece, but the remainder of the grindstone went on undisturbed.

The contributors to John Hurley's Thanksgiving dinner will be pleased to know that nearly \$15.00 in all were raised. Mr. Hurley desires us to express his sincere thanks and appreciation.

One of '90's carpenters has hard work to tell by the looks of a piece of wood whether he has planed it or not. So now, after planing a piece he carefully marks it "Plained."—Boston *Tech.*

There is a man in the Senior class  
Who is said to be struck on a "lass,"  
When he's asked "what's her name?"  
He replies Mary Jane  
And "nach Hause" he shoots very fast.

According to our Prof. in geology all the chestnuts in Mass. and N. H. are imported. This will put many of our professional smart(?) punsters on the retired list, and we hope they will stay there.

Work on the standard instrument building at the foot of the hill is progressing as rapidly as could be expected, when we consider that it is to be finished in November. What November? Some other November.

Let us make more of our singing in chapel. Though it now is the attractive feature of the exercises, let us make it still more so. We regret to see any men who can sing and will not.

And behold the horse let fly his heels and kicked. And the student became sore angered. Straightway the wise men put the horse's head where his tail was, and erected a fence before him, when lo, all was serene once more.

Affectionate mother (to daughter just home from church service): "Well, my dear, where was the text this evening?"

Blonde maiden (absent-mindedly): "Techs! Looked all round for them but didn't see any. There weren't any Techs there." (Retires to bed disappointed.)

"The bells will be fixed in a few days," we were told at the beginning of the term. Time goes on and still silence reigns throughout the halls. The professors' consciences do not trouble them now when they keep their classes over time.

It is said that a certain professor at the Hall has adopted a new system of marking, in which one of the chief signs used is the word "rats," written with a blue pencil across the page.



Whether this means 10 or 0 we leave our readers to conjecture.

Persons wishing to buy claims in the vein of lead ore at the Quinsigamond quarries, should apply to Senior B in the chemical lecture room, where they may obtain full circulars of information concerning the steps necessary to procure the same. They say that claims will not bring as much as when first offered.

The committee appointed to secure a design for the Seniors' class pin, failed to find one according to their liking, and accordingly submitted a design of their own. This has been approved of by the class, and before long we may hope to see many a shapely Senior's vest adorned with the emblem of his class.

Student (to Prof.): "Can you tell me if Oliver Goldsmith was ever engaged in the vocation of civil engineer?"

Prof. (smoothing his moustache): "Well, really, now, I—I should have to— But why do you ask such a question?"

Student (starting for the door): "Because he says he dragged a lengthening chain after him one day when he went out for a walk."

In spite of the danger of accident in playing foot-ball, none of our eleven have been hurt at all seriously this fall, while three of the other students, who do not play, have been. Therefore, if we were to judge from life at the Tech, we would say: Never attend the gymnasium, nor go hunting, nor work in the shop. But if you must have exercise, and don't wish to be laid up with a broken wrist, sprained ankle, or foreshortened thumb, play foot-ball.

There are being built at the shop, through the order of Messrs. F. & W. E. Bloodgood, architects, two fine elevators for the auction room of Messrs.

Brown & Seccomb, importers and wholesale dealers in fruits, corner State, Bridge and Whitney streets, New York city. These elevators are placed side by side, and for novelty of purpose they surpass anything we have yet seen. They are to be used for lifting fruit from the basement, or store room, to the auction room above, on the level with the street. Here the prospective buyers are seated, amphitheatre-like, facing the elevator shaft. The fruits are sold by samples, each sample consisting of three barrels of the fruit, which are placed on one of the elevators and lifted up for the inspection of the buyers. As soon as one lot of fruit is bid off by the auctioneer it is lowered to the room below to be unloaded, and the sample of another lot appears on the other elevator to be disposed of in like manner. Thus this alternating movement continues so that there are constantly before the buyers samples of a new lot of fruit. It is estimated that 30 seconds is the time required to load the elevators and effect the sale, hence the advantages of the system are evident. The elevators are being built of selected materials, having brass plungers, nickel-plated trimmings, and in fact all the latest improvements which serve to make a handsome and complete apparatus.

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A VASSAR girl she made a pie—  
A pie which man nor dog ate,  
Her brother took it by and by  
And used it for a home-plate.

—Cleveland Sun.

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Noah was the first pitcher on record. He "pitched in the ark with *in* and with *out*." The game was finally called on account of rain.—Colby Echo.

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"GIVE me a kiss, my darling, do?"  
He said as he gazed in her eyes so blue.  
"I won't," she said; "you lazy elf,  
Screw up your lips and help yourself."

—Dartmouth.

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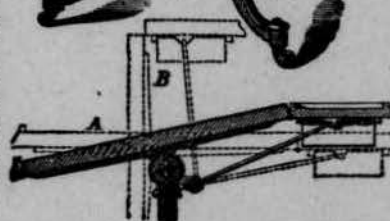
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Fig 1



Fig 2



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