

# The Tech.

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VOL. I.

## THE TECH.

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THE public opinion of the character of the students of an educational institution is formed largely from their behavior when assembled together in large numbers. It is natural for a number of young men united by the bonds of college life to indulge in slight excesses, knowing that their number is too large and the offence too small to warrant the using of sufficient force to bring them to justice. Such actions are always made to appear much worse than they really are through the medium of the public press, and public opinion is formed accordingly. The public does not consider the fact that such actions are done by a comparatively small number of the students, and that the occurrences are few and far between. Again, the offence is seldom more than sacrifici-

cing the comfort of one portion of an audience to the amusement of the other. Be it as it may, it is always better for students to avoid exciting public comment and bringing censure upon the institution which they represent. Whether there are a hundred or half a dozen students together, they are considered as representatives of the institution of which they are members. It is necessary to bear this in mind, and be more careful when in large crowds than when in small bodies.

WE would in no way reflect upon the management of the Institute, but we feel it almost a duty to call the attention of the students here to the condition of our fire apparatus. Soon after the opening of the present school year, part of the men petitioned for instruction and practice in the use of the apparatus, and their petition was granted. It was understood that action would be deferred until spanners to fit the hose couplings could be obtained. No instruction, however, has yet been given. It may be seen at a glance that the apparatus is not at present in a condition to be used with any great effect. It is understood that attempts to use the hose for local purposes have not been eminently successful, and also that an examination of the so-called extinguishers has failed to demonstrate their present readiness for use. Our fire buckets are supposed to be always in place; we have seen them, however, used for carrying sawdust about the halls, and recently three of them were placed to catch the drippings from a leaky skylight. In the basement there are a number of "automatic sprinklers"; in case of a fire at night, and possibly under some other circumstances, these might be of some use, but only in that part of the building.

The building itself is not even supposed to be fire-proof. The stairs are of wood, the treads being only covered with iron. In case of fire, many lives might depend on our one fire escape, and that does not reach to the upper story.

In view of these facts, it seems proper and even necessary that some of the students should understand the arrangement and use of our fire apparatus, and should take an interest in keeping it in order and ready for use. Apart from the additional safety it would afford us all, it would make us familiar with the manner in which large buildings should be protected from fire. We sincerely hope that the arrangements for giving instruction in this department will soon be completed.

COMPLAINTS regarding the state of the gymnasium have come to be so numerous and outspoken that we felt it our duty to look into the matter; and accordingly, the other day, we visited that building for the purpose of seeing for ourselves. We feel compelled to acknowledge that all we have heard said was perfectly justifiable, and that the gymnasium is in a deplorable state of neglect. Whose fault this is, whether the Faculty's or the gymnasium committee's, we are not prepared to say; but that something should be done, and that that something should take the shape of a radical change in the management of affairs, is undeniable. There is hardly a piece of apparatus in sufficient repair to be fit for use; dirt reigns supreme, and the whole place has a general air of dilapidation, even down to the stoves, which do not stand up straight. The gymnasium is always filled with a raft of howling young school-boys, who come in there to play and not to exercise, and who spend their time in climbing all over the apparatus, injuring it, and making themselves a nuisance to those who go there for good solid work. This state of affairs seems wellnigh hopeless, but the remedy is really very simple. All the trouble lies in the attempt at dual management by the Faculty and the gymnasium committee. The committee are

supposed to administer the affairs of the building, while the Faculty furnishes the funds. The consequence is that if any complaint is made to the Faculty, it is referred to the committee, and if any complaint is made to the committee, they refer it to the Faculty; and it leads to nothing being done about the matter. The gymnasium is a building of the students, for the students, and should be managed by the students.\* The question might then arise, Whence would the committee derive their funds? Why, from the rental of the boxes, from the fees which Chauncy Hall pays for the privilege of drilling there, and from the restaurant. These moneys are derived from the gymnasium, and should, in common justice, be devoted to its support; these would be ample, and the atrocious practice of letting the building for innumerable newsboys' dinners, etc., would be done away with once for all. The holders of boxes object to paying their rent, for they say, "It is turned in to the Faculty, and we get no good from it"; while if they felt that it was paid to a committee, who devoted it to the interests of the gymnasium, they would be willing to pay a larger rent, and pay it cheerfully too. Of course, any such scheme as this could not be carried into effect until extensive repairs were made; but why could not the money for these be raised by an entertainment of some sort? This method is resorted to by all the colleges, and is a perfectly legitimate one. If some of the men most interested in the welfare of the gymnasium were to take hold of a thing like this with some energy, we would have really a well-equipped gymnasium.

We desire to notice, from time to time, the graduates and former members of the Institute. Permanent class secretaries, and all others, are invited to send information.

THE TECH can pay no attention to anonymous contributions. Correspondents will please not forget to sign their names.

\* The gymnasium was built entirely from students' subscriptions.

## Contributions.

### The Herreshoff Launch.

IN the last number of the *Mechanical Engineer* we notice an account of another victory for the Herreshoff boats. The English navy has, within the last few years, been providing itself with a species of swift, safe despatch or vedette boat. Private firms have competed with one another in furnishing boats which should meet the high requirements of the Admiralty. The Herreshoff Company, of Bristol, R. I., learning of the existing demand and the extent to which it was met, put in a proposal to furnish vedette boats superior in every respect to those which were then regarded as the perfection of English naval construction of that class.

In July last the Herreshoff Company sent over two boats, each forty-eight feet long, nine feet beam, and five feet depth. These were tried in competition with a boat of the same class and power, and of exactly the same size, built by John White, of Cowes, who, on account of the superiority of his boats, has enjoyed a monopoly in supplying the navy with vedette boats. After an exhaustive series of trials, the English judges pronounced unanimously in favor of the Herreshoff boats. They made fifteen and one eighth knots an hour against twelve and six tenths knots of White's boat.

Herreshoff's boats were lighter than White's, owing to the peculiar form of boiler and compound engine. The examiners pronounced enthusiastically in favor of the Herreshoff safety coil boilers as unexplodable, less liable to injury from shot, capable of raising steam more quickly, far lighter, and in all respects superior to White's, which was an ordinary tubular marine boiler. Herreshoff's boats were promptly accepted and two "navy pinnaces" ordered.

In October they were tried against White's pinnace, and beat it nine and one fourth to seven and one eighth knots. The pinnaces were of the same size: thirty-three feet long, eight feet ten inches beam, four feet one inch depth. The official report credits Herreshoff's thirty-three-

foot pinnace with greater floatage capacity, more speed, and more available space than a thirty-eight-foot English pinnace.

The Herreshoff Company have an order for two pinnaces for the French navy, and it is expected that their boats will create more of a surprise in France than they did in England, for the French are behind the English in the speed of their launches.

Mr. Nathaniel G. Herreshoff, of the Herreshoff Company, was formerly a student at the Institute. D.

### Annual Dinner of the A. A. M. I. T.

THE third annual dinner of the A. A. M. I. T.,\* which took place on Friday, the 30th, at Young's Hotel, proved very enjoyable, although we all felt keenly the absence of Mr. Ware's familiar face. If he was not with us in body, however, he was with us in mind; for he sent a very feeling letter and some excellent verses, which are subjoined.† The menu itself was ample and excellent. The menu cards, designed by some of our members, were the best we have had yet. The first page, bearing the announcement of the fact that the dinner was the third annual one of the association, together with the date and place of holding it, consisted of a scroll-work design with four little sketches of Boston, Paris, Assos, and New York, intended to call to mind the various architectural colonies in those places. Of the two inside pages, the left-hand contained the menu, and the right some verses from an old window in the Duke's Head Inn, at Yarmouth, together with a song of Mr. Ware's. The heading of the left-hand page was a very taking little scullery boy bearing a roasted turkey on a dish, and the whole framed in by the wire of an old hostelry bell; the bell itself, well over to the

\* Architectural Association of the Massachusetts Institute of Technology.

† We telegraphed for Prof. Ware's permission to print these verses; but as we have received no answer, we judge he has not returned from the West as yet. We will print them as soon as we get his permission.

right-hand side of the page, echoing the figure of the boy. The back bore an excellent sketch of "Ye Three Wise Men," — the dinner committee, — sailing off in the architectural punch-bowl, with a ladle and T-square doing duty for a mast and rudder respectively. As the dessert was brought on, our president, Mr. Aiken, rose and made a short address, finishing by presenting Mr. Rotch as toastmaster, who in turn presented Gen. Walker, president of the Institute, to answer to the toast of "The Institute." Gen. Walker rose amid a storm of applause, and after thanking the company for hearty welcome given him, he went on to say how an architect more than any other professional man stood alone before the world, to be praised or censured for the merits or demerits of his work. To him, he said, Boston seemed one of the handsomest cities, architecturally speaking, on this continent; and in his mind, this was no doubt due to the influence of the Department on the community. During his address he made some allusion to both Prof. Rogers and Mr. Ware, and the great losses we had sustained by their resignations. Speeches were also made by the following gentlemen, in answer to the toasts placed with their names: Mr. Whidden, "The École des Beaux Arts"; Mr. Austin, "Our Travelling Members"; Mr. Greenleaf, "The Expedition at Assos"; Mr. Weatherell, "The Sketch Club"; and Mr. Dodd, "The Profession." Mr. Weatherell, in his reply to the toast of "The Sketch Club," spoke of a hope that at some future time the club would be able to establish a travelling scholarship in the Department; a thing which in his estimation, we were sorely in need of. This was a mere suggestion, and is all very vague as yet; but we thoroughly agree with Mr. Weatherell about the want of such a scholarship, and we sincerely trust the scheme may come to be realized at some not very distant date. Also, a plan for founding an association sketch-book was put forward by Mr. Andrews, and met with such general approval that Mr. Aiken appointed a committee of three, consist-

ing of Mr. Andrews, Mr. Austin, and Mr. Chamberlin, to take action in the matter. When the assembled company had risen from table, we had some concerted music, and Mr. Chamberlin and the other French fellows sang a very amusing little French song; after which the company broke up, having spent a most agreeable evening.

G. T. S.

#### Σ. M. E.

THE paper by T. B. C., in a recent issue of the TECH, calling attention to our need of societies and more general intercourse between the students, has already borne fruit in the shape of a mechanical debating society, which has been lately organized. The objects of this society, as set forth in the constitution, are the furtherance of a knowledge of subjects of mechanical interest and the attainment of readiness in debate. Its meetings are held Thursday afternoon of each week, when appropriate topics are discussed, or papers on matters of special interest read by members. The enigmatical initials will probably be recognized by students of mechanics as denoting the sum of all the forces of the department; and this being the case, a resultant of corresponding magnitude will be expected.

At the first regular meeting, G. J. Foran, '83, gave an interesting explanation of the action of steam pumps exemplified by the Deane, Blake, Knowles, and Cameron, and illustrated by diagrams and models. The valve action of the Knowles pump was principally dwelt upon, and the combined rotatory and translatory motion of the secondary piston made clear. At the close, a vote of thanks to Mr. Foran was passed.

On the following Thursday, a debate was held on the question of the relative economy of rotary and non-rotary pumps: Manning, '82, Gale, '83, for the former; Walker, '82, Bryant, '83, for the latter. The discussion lasted an hour or so, the relative merits of different pumps being well brought out. The Worthing-

ton was taken as the representative of the direct-acting pump, and the Leavitt and Corliss as best examples of the rotary. The debate was somewhat general, though not as much so as could be wished; but considering the short time for preparation, and the novelty of the proceedings, it was as successful as could be expected. The arguments on either side were summed up by Messrs. Bryant and Gale, and a vote of the society taken at the close, deciding in favor of the general superiority and economy of rotary pumps by a considerable majority. However, as one member suggested, the question has not been decided for all time!

#### M. I. T. A. C.

THE winter meeting of the Athletic Club came off last Saturday afternoon; and barring the rather long waits between the events, — which waits, however, were somewhat relieved by a few pieces from Brown's Band, thoughtfully provided by some of the club members, — seemed to be thoroughly enjoyed by a large number of ladies and gentlemen.

VAULTING. — W. T. Ripley, '82, 7 ft. 3 in.; F. O. Harriman, '83, 6 ft. 10 in.; H. H. Cutler, '82, 6 ft. 4½ in.

Ripley vaulted an inch higher than last year, and Harriman and Cutler also showed a marked improvement; though, owing to the fact of there being no fence, it is doubtful if these results go on record.

STANDING HIGH JUMP. — E. M. Cheeney, Sp. '84, 1, 4 ft. 5½ in.; W. T. Ripley, '82, 2.

POLE VAULTING. — R. Tilden Gibbons, Sp. '83, 8 ft. 6 in.; E. T. Sturgis, '84, 8 ft. 4 in.

TUG OF WAR (first pull, three minutes' time limit). — '84 (E. C. Hillyer, anchor, F. M. Haines, T. C. Dupont, Sp., S. S. Dearborn), 1 by 9 in.; '83 (F. O. Harriman, anchor, F. B. Richards, H. B. Gale, W. Packard, Sp.).

'84 gained on the drop, and notwithstanding all '83's endeavors, kept its advantage to the end.

PARALLEL BARS. — F. H. Putnam, Sp. '82,

won against H. H. Cutler, '82, both men doing excellent work.

TUG OF WAR (second pull). — '85 (D. G. Baker, anchor, F. H. Cutler, C. W. McFerran, D. W. Park), 1, by 5 in.; '84 team, 2.

'85 did some splendid work, their anchor in particular.

CLIMBING ROPE (first climb). — H. M. Mansfield, '83, 1; H. H. Cutler, '82, 2.

CLIMBING ROPE (second climb). — F. H. Putnam, Sp. '82, 1; B. F. Copeland, '85, 2.

CLIMBING ROPE (third climb). — H. M. Mansfield, '83, 1; F. H. Putnam, Sp. '82, 2.

Mansfield climbed very neatly, spurred on by the cries of "Now, Henry!" from his excited classmates, and won in the final from Putnam by about three inches.

RUNNING HIGH JUMP. — W. T. Ripley, '82, and R. Tilden Gibbons, Sp. '83, tied at 5 ft. 2 in.; G. L. Heins, '82, 5 ft. 1 in.

Ripley and Gibbons decided not to jump off the tie, but tossed up for the medal, which fell to the former.

TUG OF WAR (third pull). — '85, 1, by ½ in.; '83, 2.

This tug called forth a great deal of enthusiasm, '84 siding with '83 in cries of encouragement; but '85's men were up to their business too well for '83, and won after a most exciting struggle, thereby taking first medal.

HITCH AND KICK. — E. D. Dorchester, '84, 8 ft. 6 in.; T. C. Dupont, Sp. '84, 8 ft. 4 in.; E. T. Sturgis, '83, and N. G. Robertson, '85, tied for third place; G. L. Heins, '82, fourth.

The winner did superbly in this, and fully deserved the applause which his 8 ft. 6 in. called forth; and with Dupont's 8 ft. 4 in., it seems a pity a second medal was not also given.

Thanks are due to Mr. P. F. Ferris, U. A. C., who acted as referee, and to the judges, Messrs. Henry Bryant and H. Ward Leonard, '83, all of whom acted in a most impartial and satisfactory manner.

Mr. G. T. Jarvis, '84, was clerk of the course, and Mr. G. Temple Snelling, '82, acted as scorer.

The new steamer of the Inman line, the "City of Rome," is the largest mercantile ship afloat, excepting the "Great Eastern"; but she is infinitely superior to the latter, even in her best days. The new vessel has a length over all of 600 feet, beam 52 feet, and total depth not less than 60 feet. She has three tandem compound engines, high-pressure cylinders being 43 inches in diameter, and low-pressure 86 inches, with stroke of six feet. She has eight double-ended boilers, and forty-eight furnaces. The crank shaft is the largest in the world, weighing 66 tons, and the screw shaft is 24 inches in diameter. The main saloon is 72 feet by 52, and 248 persons can be seated in it at once. Her first voyage across the Atlantic was made in nine days, having been run at a moderate speed.

Lieut. Francis Winslow, in an article on the "Deterioration of American Oyster Beds," says that where, at present, one oyster arrives at maturity, about 1,185,000 eggs or oysters perish.

At the last meeting of  $\Sigma$ . M. E., the following was discussed: *Resolved*, That engines of high rotative speed are superior to those of low rotative speed. Ripley, '82, Hammett, '84, for the affirmative; Snow, '82, Kerr, Sp. '83, for the negative.

German Conversation Class. — Instructor to Mr. X., who has spent Sunday in New York: "With whom did you talk Sunday?" Junior: "Mit mein Schwester." Instructor to Mr. Y., who also lives in New York: "Do you see anything to correct in his answer?" Mr. Y.: "Yes, sir! Mit *meiner* Schwester." — *News*.

The Crescent Bicycle Club will give its second annual party in Odd Fellows' Hall, Wednesday evening, Feb. 1, 1882. The committee of arrangements includes a number of Institute students, past and present, and the affair promises to be one of the most brilliant ever given in Odd Fellows' Hall. Tickets, \$2.50, admitting gentleman and lady, and including supper, can be obtained of J. Means and W. P. Kennard.

## Mechanical Engineering.

THE new portfolio rack is a good thing.

$\Sigma$ . M. E. is already a recognized reality.

A suggestion, — electric light for the steam laboratory; there seems to be an aversion to sunlight.

The Seniors are prowling in the depths, occasionally taking cards.

The engine lately built in the shops has been indicated.

The new Cunard steamer "Servia," in a recent trial of speed, ran at the remarkable rate of twenty and one half miles per hour, with 2,500 tons dead weight; engines 10,000 horse-power.

At the royal gun factory, Woolwich, England, there are sixty-foot lathes sufficiently powerful to reduce by six inches at a single cut the diameter of a twelve-foot tube.

The Atlantic Works, of East Boston, have just completed a sixteen-foot cylindrical boiler for the new Bangor steamer "Penobscot," containing two hundred and sixteen  $4\frac{1}{4}$ -inch fire tubes. These works are well worth a visit by the mechanicals.

Hollow steel shafting is made by casting the metal around a core of lime, the ingot being finally rolled into shafting, the lime core going with it and diminishing in diameter in the same proportion as the metal, even when the total diameter is reduced as low as one fourth of an inch.

There are nearly 18,000 locomotives in the United States. The Middle States have 6,000, Pennsylvania having 2,700; New England, 1,700; Western States, 7,800; Southern, 1,800; Pacific, 420.

The double-cylinder Shaw locomotive, which had a trial on the Boston and Providence road, and afterwards on the Fitchburg, was recently tested on the Camden and Atlantic road. In regard to counterbalancing, the trials were very satisfactory, but it remains to be proved whether the machine has the requisite power, economy, etc.

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 Department of Architecture.
 

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THE Railway Station is due on Monday, the 8th.

Prof. Longfellow has been quite ill with a bad cold.

The last problem at the Sketch Club was a wooden mantel, to cost not more than twenty-five dollars.

Our late fellow-student Cobb seems to have fallen on his feet in a most distinguished manner. He has just gotten the competition for a large club house in Chicago, and some fifteen of the members have intrusted him with large dwelling-houses besides. The consequence is, he has migrated to the land of grain elevators, and taken ten draughtsmen with him to set up an office there.

There have been some slight changes in the arrangement of the hours in the department lately, owing to the substitution, on Tuesday and Thursday afternoons, of Prof. Clark's lectures on Greek Architectural History, for Mr. Hooker's on the Elements of Architecture. Prof. Clark's lecture on Specifications is omitted on Thursday morning, and Mr. Kidder's work comes all together on Saturday morning, from nine to twelve; the last hour, eleven to twelve, being devoted to the lecture given heretofore on Thursday afternoons.

Sargent, '80, has come back into the profession after being with the Geological Coast Survey for two years, and is now in Mr. Luce's office.

During the month of July, the Hartford Boiler Insurance Company examined 3,926 boilers, and found 2,222 defects, five hundred and nineteen dangerous.

There never was a baser calumny expressed than the stock phrase that education puts a man above his works. — *Professor Rogers.*

The semi-annual examinations begin Wednesday, the 18th.

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 Science Notes.
 

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A VIENNA chemist announces the discovery of a new and remarkable variety of glass. Its composition is peculiar, since it contains neither silicic nor boracic acids, nor potash, soda, lime, nor lead. It differs but little from ordinary glass, excepting in two important points: it can be readily fused on to zinc, brass, and iron, and it is not acted upon by hydrofluoric acid. These two properties will make it of great value in the arts.

Lengthy advertisements lauding the virtues of a so-called form or preparation of ozone have appeared in many papers. Supported by the best authority, we make the statement that this pretended ozone consists of charcoal and sulphur, and would therefore be dear at three cents a pound. Its efficacy depends on sulphurous acid, and so is only temporary.

Next March, Turkey's old and clumsy system of weights and measures gives way to the metric system. The unit of the new system is called the *archius*, and is equal to the French metre.

Cremation makes great progress in Italy. One hundred and thirty-nine incinerations have taken place at Milan and Lodi, and the number increases every month.

Prof. Hawes, of the Smithsonian Institute, throws great discredit on Dr. Hahn's ostensible discovery of organic remains in meteors. He says that they are bronzite in radiate forms, and that Dr. Hahn is a man whose imagination has run wild.

The results of experiments instituted by M. Pictet, and later by MM. Hautefeuille and Cailletet, to determine the density of liquid oxygen, hydrogen, and nitrogen, are favorable at very low temperatures to the theory of the relation between hydrogen and magnesium, oxygen and sulphur, nitrogen and phosphorus; but as the freezing point of water is approached, discrepancies, which grow more and more marked, are manifested.

## In General.

WE'VE got the snow, — where is the sled?

Keep advertises to re-tail shirts.

If you want a *lard-y-da* dinner, go to Smith's.

Jan. 1, 1882, was a cold day for Mother Shipton.

Extremely mean ratios are occupying the attention of the mathematically inclined Freshmen.

Visitors in the forge shop generally admit that the work is well-did.

An '85 man has named his razor Husbandry, because borrowing dulls its edge.

It is announced that a brass band has been discovered in the solar spectrum.

Reference books for Constitutional History: Jonathan Edwards's "Horrors of Everlasting Damnation," "The Gospel Way of Escaping the Doleful Doom of the Damned."

There is a 5 foot  $4\frac{1}{2}$  man and a 6 foot  $4\frac{3}{4}$  man in '82. We don't believe, however, that the extremes equal the means.

Mr. Faunce recently read to the '82 miners a very interesting and brief paper on the copper of the Calumet and Hecla mine.

We will have our recreation, whether we get it by hook or Crook. Did you see the body-guard that the city kindly lent us the other evening?

Little drops of water,  
Little grains of sand,  
Make the milk and sugar  
Plenty in the land.

*Our Treasurer.*

Professor: "Mr. X., can you tell me why the days are longer in summer and shorter in winter?" Mr. X. (with alacrity): "Yes, sir; it's because heat expands and cold contracts." "Weep, weep, all weep!"

At the last seance held by the third-year class, mittens were seen to dance around the room, and frames moved up and down the wall. The chairman was undecided as to who pulled the strings.

A Freshman was recently overheard to say, referring to the mining laboratory, "This is used for mechanical engineering, and is devoted to the testing of engines."

*Freshman to his landlady, whose furniture is rather uncertain:* "I am sorry to say that my bed broke down last night."

*Landlady:* "Why, how did that happen?"

*Freshie:* "I am very sorry, ma'am, but I forgot myself, and laughed in my sleep."

He had been told that he could easily remember the sector of a circle, since it was like a piece of pie; and he was therefore rather surprised when the answer, "Sector, the sixth of a circle," came back marked with the big F.

Geology class. — *Mr. Blunderwood (earnestly):* "Professor, will you please give us the proof of the former gaseous condition of the earth?"

*Professor (somewhat astonished):* "That is what I have been giving for the last half-hour."

*Confusion of Mr. B. and corresponding glee of his classmates.*

One of the Freshmen exerts so demoralizing an influence that he has succeeded in inducing his steam radiator to smoke cigarettes. He attaches the cigarette-holder to the escape-cock by a rubber connector. It is then only necessary to open the cock to have a mechanical Gen. Grant.

At a recent class meeting of '82, a committee of three, Messrs. White, Johnson, and Snow, were appointed to examine the merits of the different photographers in the city, and report as soon as possible. The next class meeting will be held within two weeks, to decide upon their report; and every member is earnestly requested to be present.

The "Laboratory" of the class of '81 held their annual dinner at the Vendome, Saturday evening, Dec. 31. A very pleasant evening was passed, stories from the Great West being highly appreciated. The old year was shown out with the proper ceremonies, and all parted with the best wishes and happiest anticipations for a happy new year.

For a poem, which the devotees of *Patience* would probably call a "weird, wild, fleshly thing," let us quote the following extract from a children's primer: —

"Z is a zebra that lives in the circus,  
Striped all over, but not a good work-horse;  
The picture is pretty, and some day I 'll strive  
To go to the circus and see him alive"

The rhyme on "circus" and "work-horse" is certainly unique.

A lady from the rural districts, — no offence to Dorchester intended, — on entering a Beacon Street car the other day said to the conductor that she wished to go to Arlington Street. The car soon reached there, and as the conductor was helping her out, she said, "I am so much obliged to you; I really hope you have n't gone far out of your way to bring me here."

The civil engineers recently held a meeting for the purpose of forming a society. A committee was appointed to draw up a constitution.

We are exceedingly glad to state that Prof. W. R. Nichols has so far recovered as to visit the school.

Prof. W. O. Crosby has recently issued a very concise little pamphlet, entitled "Common Minerals and Rocks." It is published by the Boston Society of Natural History as one of their guides for science teaching. The price is only thirty-five cents. A set of forty-six minerals and rocks spoken of in the volume are sold with it for \$1.00 extra.

The determination of a portion of the students of the Institute, to attend in a body the performance of the "Black Crook," on the 2d inst., met with considerable censure from another portion. A mass meeting was called to disapprove the visit, but finally contented itself with passing resolutions requesting those who went to preserve the good name of the Institute.

Subscribers may obtain copies of the paper which they have not yet received, by applying to H. F. Ross, Sec. of THE TECH.

## Exchanges.

THE *American Machinist* is one of the best of our exchanges devoted to scientific interests. In general appearance it is much the same as the *Scientific American*, and it embodies many of the special advantages of that well-known journal. Its articles are finely illustrated, and written by engineers and men of high standing. We would especially recommend it to the notice of our mechanical students. The issue of Jan. 7 contains two interesting articles on locomotives. One gives a description of the swiftest American locomotive, built by the Baldwin works. Its regular running time is thirty-two mile in thirty-seven minutes, and its fastest mile ever made was in forty-five seconds. The second is on the locomotives of 1881; 1,775 having been turned out during the year, by eleven works in Pennsylvania and New England.

The *Boston Journal of Commerce* is a very able illustrated weekly paper, very handsome in appearance, devoted to the interests of engineering, manufacture, commerce, etc. It has technical articles on workshop matters, and gives considerable space to the cotton industry and machinery. In the issue of Dec. 31 will be found a paper on machine riveting, giving the advantages and disadvantages of this method, in comparison with hand riveting; and also some curious indicator cards, taken from actual work, and showing the reckless waste of steam which an ignorant setting of valves occasions.

The *Bates Student* for December is just in, — a monthly, of magazine form and good appearance; the four leading articles have considerable literary merit, and the editorial work is good. Our criticism, if we make any, would be on the weak character of the fun in the "Clippings."

The *Colby Echo* appears in a garb befitting the holidays, enclosed in a Christmas cover, appropriately embellished with palms, swallows, and butterflies. Delightful climate has our contemporary!

Harvard's new daily, the *Herald*, comes to hand, its first issue containing a notice of the

"Techs at the Globe." The paper is a four-page sheet, with six columns of reading matter. It will doubtless prove of benefit to the university, as has its brother daily, the *Echo*, whose reputation is well established.

The *Acta Columbiana* publishes a new set of foot-ball rules, and hopes they will be adopted for the coming year, thinking that thereby foot-ball will attain an unprecedented success. A few of the rules are as follows: 3. The riot shall last an hour and a half, with intervals at every half-hour, of ten minutes each, for drinks. If at the end of the game any of the players shall be uninjured, innings of fifteen minutes each shall be played until he is either killed or entirely disabled. 4. A match shall be decided by the number of bones broken. One dead man shall count according to his bones. 5. Two teeth knocked out shall count as one bone, and shall count for the side not owning the teeth. The referee shall promptly disqualify men with false teeth. 6. If one of your opponents has possession of the ball, knock him down and take the ball away from him. This shall be called a safety knock-down. 12. A drop kick is made by kicking one of your opponents after he has dropped. 13. A punt is made by jabbing a man in the stomach with the ball. Good players never fail to make punts on all occasions. 18. The ball is dead when the player carrying it is knocked down. In some instances this rule may also apply to the player. 29. All well regulated foot-ball matches should end with a free fight all around.

The literary *Courant*, edited by the young ladies of Abbot Academy, Andover, appears on our table. The *Courant* aims to be more than a journal of every-day school-girl life, and has "of necessity assumed a graver tone." "Perchance this graver tone may be due to our graver interests; for are we not seeking to probe the mysteries of deep political questions, to fathom the depths of party tenets, and to realize the crying need of civil-service reform; fitting ourselves by wide culture, by that universalism which the age demands, to be in the fullest sense intelligent

women!" Truly things are progressing at Andover. The present number, dated November, has articles on "The Value of the Ideal," "The Seasons," "The Historical Novel," and "Hilda"; a short story, "Miss Eunice's Children"; an interesting description of Kentucky and her wonderful natural features; and a well-written story of the life of Marie Angelica Kaufmann. We welcome the *Courant*, and wish it success in its new departure.

Dr. Cuyler wants all young ladies to band together and say: "No lips shall touch my lips that have touched a bottle." Rather rough, this, on the fellows that were brought up by hand. — *Ex.*

Professor of Physics: "What is Boyle's Law?" Diligent Junior: "Never trump your partner's ace." — *Ex.*

A homely girl with a small foot takes ten per cent more comfort in this world than a pretty-faced girl who knows it is all day with her if she falls over a log. — *Ex.*

### "Arma Virumque Cano."

(MODERN VERSION.)

In the light of the moon they sat on the beach  
 And what was the harm?  
 For perhaps he was trying that maiden to teach  
 All about the bright stars, and the names we give each;  
 Or perhaps he was turning his hopes into speech:  
 But where was his arm?  
 Now, that maid seemed to have a rather fair form;  
 But what hid her waist?  
 Well, perhaps 't was to shield her from some coming  
 storm,  
 Or perhaps 't was to keep that dear maiden warm, —  
 Round the waist of that maiden's rather fair form  
 His arm he had placed.

*Ex.*

### A Picture.

THERE'S a face that haunts me ever,  
 There are eyes I always meet,  
 As I read the morning paper,  
 As I walk the crowded street.

Ah! she knows not how I suffer,  
 Hers is now a world-wide fame;  
 But till death that face shall greet me, —  
 Lydia Pinkham is her name.

*Ex.*

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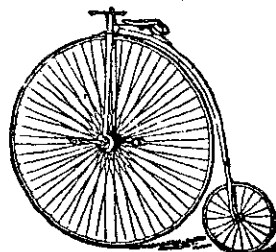
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