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The Tech.

VOL. II.

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THE TECH.

Published on alternate Wednesdays, during the school year, by the students of the Massachusetts Institute of Technology.

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ALFRED MUDGE & SON, PRINTERS, 34 SCHOOL STREET, BOSTON.

WE have received a copy of the *Register* of Lehigh University, of South Bethlehem, Pa., an institution whose prime object is so similar to that of the Institute of Technology that we think our readers will be interested in a few facts concerning it. The University was founded in 1865, by the Hon. Asa Packer, of Mauch Chunk, who gave \$500,000 and one hundred and fifteen acres of land in South Bethlehem to establish an institution which should afford the young men of the Lehigh Valley a complete technical education for those professions which had developed the peculiar resources of the surrounding region. In addition to these gifts, made during his lifetime, Judge Packer, by his last will, secured to the University an endowment of \$2,000,000.

Courses of instruction are provided in civil, mechanical, and mining engineering, chemistry and metallurgy, in addition to which there is a department of general literature and classics.

Through the liberality of the founder, the trustees were enabled, in 1871, to declare tuition *free* in all the above courses, which are open to young men of suitable talents and train-

ing, from every part of the world. Students in the technical departments of the school pursue the same course of study for the first year and a half. At the end of that time, the student selects his course and follows its programme. The general plan of these courses is much the same as that followed at the Massachusetts Institute of Technology, but there are some minor differences, which deserve attention as suggesting possible improvements in our own institution. For instance, the study of mechanical engineering embraces a course of shop instruction, but, in the language of the catalogue, "it is the foreman's and superintendent's knowledge which is required rather than the manual dexterity and skill of the workman and tool hand. The requirements peculiar to the latter are by no means despised, and students are encouraged to familiarize themselves with them during leisure hours; but manual work in the shops forms no regular part of the course. On the contrary, the student enters the shop with hands and mind free to examine all the processes, operations, and machinery, and ready at any moment, at the call of the teacher, to witness an operation of special interest, or to examine into the causes of and remedies for any sudden breakdown. Dressed in overalls, and provided with note-book, pencil, calipers, and measuring rule, the student sketches the important parts of the various machine tools, notes down the successive steps of each of the important shop processes as illustrated by the pieces operated upon, and, having first obtained a clear idea from the working drawings of what is about to be constructed, follows pieces of work through the shops, from the pig or merchant form to the finished machine. . . . The students' work is directed not only by these drawings, and by the printed programme given him at the start, but

also personally by a teacher, who accompanies him into the shops, gives necessary explanations, and tests the extent and accuracy of his knowledge by examining the sketches and notes, and by frequent questioning." Whether the above scheme is better than our plan or not may perhaps be questioned; each seems to possess certain advantages.

We cannot forbear quoting the paragraph of the *Register* referring to the gymnasium, as setting forth exactly what that indispensable adjunct to a well-managed college ought to be. "The new gymnasium is a handsome and spacious structure, built and equipped with the utmost thoroughness. It will be furnished with the best patterns of apparatus, adjustable to the physical powers of the students. The bathing arrangements will be complete, and the dressing accommodations ample. Opportunities for recreative exercises will be provided in the bowling alley, billiard, rowing, fencing, and sparring rooms. It will be placed under the care of a competent director, who will give instruction in classes, and also to meet the special wants of each individual." The matter of having "a competent director" seems to us a very important one.

Another point which we would like especially to bring to the consideration of those having the affairs of the Institute in charge is, that the degree of Bachelor of Science is conferred only upon graduates in the course of science and letters, while the students in the technical departments receive degrees appropriate to the various professions which they intend to follow. Thus the student in civil engineering receives the degree of Civil Engineer (C. E.), the graduate in the mechanical course the degree of Mechanical Engineer (M. E.), the graduate in mining and metallurgy the degree of Engineer of Mines (E. M.), and the graduate from the department of chemistry is entitled to write himself Analytical Chemist (A. C.). Where the instruction is sufficiently thorough to warrant it, it would seem that the conferring of degrees like the above would be much more satisfactory to the recipient

than is the more pretentious but indefinite S. B., a title so unmeaning that few who have the right to make use of it care to do so.

THE prize offered in the first number of the present volume for the best contribution in each subsequent number has been awarded by the directors as follows: In No. 2, R. G. Gamwell; No. 3, A. D. Little; No. 4, H. B. Gale; No. 5, A. D. Little; No. 6, H. S. Chase; No. 7, A. L. Rotch; No. 8, H. B. Gale; No. 9, H. S. Chase; No. 10, W. R. N.

A glance at this list will give an idea of the proportion of work for the paper which is done by those not directly connected with it. Four fifths of the matter in the paper, including articles, stories, notes, locals, etc., have been contributed by those on the staff. This is by no means as it should be; we have repeatedly asked for more general contribution from the students, but the common feeling seems to be that, having elected editors for the paper, the responsibility of the students is at an end, and all that should be expected further is entire readiness to criticise the work which does appear. It may be that the standard of the paper has been raised by this process of growling upon occasion, but we are somewhat dubious, and from an editorial standpoint the method is extremely unsatisfactory. The editors have perhaps as much regular work in the school as any of the students, and the time given to work for the paper must be taken from other things. It is certainly unfair to expect them, without remuneration, to contribute the greater part of the matter as well as do the work distinctively editorial. We again invite every one interested in the paper to send contributions.

The Committee on '85's Class Supper have fixed upon Young's Hotel, Thursday, March 22, as the place and time of the festivity. The price per plate will soon be posted. The announcement is made thus early in order that each member of the class may plan to be present. The committee will be particularly glad to receive any original ideas regarding menu cards.

An Alpine Adventure.

We were sitting upon the broad piazza of the Hôtel des Voyageurs at Chamouni. The afternoon sun was slowly sinking into a mass of clouds that lined the horizon and gave promise of a glorious sunset. At this moment, however, our eyes were turned upon the mountains which towered above us, their peaks and pinnacles seeming to pierce the heavens, and their long slopes, clad in the eternal snows, shining dazzlingly white against the dark-blue background of the sky. Far away over the intervening heights the summit of Mont Blanc appeared in all its strength and majesty, while about it, yet far enough away not to seem to trespass on its dignity, the lower summits clustered like kneeling princes around their sovereign.

My companion, an old Alpine traveller, who had for many a summer haunted the peaks and vales of Switzerland and the Tyrol, and who was familiar with every legend and story of adventure which hung about the beetling cliffs and grim crevasses, drew my attention to the black line of a chasm which stood out sharply on the white side of the Aiguille du Midi.

"Do you see that dark line up there, at the foot of that steep slope?" said he. "Well, there is a story connected with that crevasse and slope which may be worth your hearing"; and, tilting back his chair, he fixed his eyes on the line of the chasm and related this story, which I will give you in his words as near as I can remember them:—

"It was a number of years ago, before mountain climbing had come much into fashion, and an ascent of that old white head over there"—nodding toward Mont Blanc—"was regarded as something worthy of special mention, not an every-day occurrence, as it is now fast becoming. It was the time of my first visit to the Alps, and I had come fresh from America, with the true, spread-eagle ideas of a native Yankee concerning the superiority of his country in all things, and especially in regard to natural advantages and mountain scenery. I had climbed all the peaks of note in the Eastern States, and had been up many of the Rockies and Nevadas, and I felt myself competent to walk up any little twopenny Swiss mountain, ice or no ice, guides or no guides. I had even conceived the idea of smuggling up a sled, and, starting at the top, I would come down in a style which should excite the admiration of timorous guides and plodding Englishmen. Mind, I was not much more than a boy, and my enthusiasm and confidence in my own powers were things extraordinary.

"On the afternoon of my arrival here I started to make up a party to climb Mont Blanc the following day, for I intended to beard the lion at the first opportunity and conquer the highest mountain at once. Greatly to my disgust I could find no guides who, by any inducements, could be persuaded to start the next

morning. No, the weather outlook was somewhat unpropitious, and nothing would move them. Such was my chagrin at my failure that I should probably have started out alone had not my friends restrained me almost by main force. To climb some mountain that next day I was determined, and at last, not without misgivings, my friends organized a party to ascend the Pic du Midi, on whose side that crevasse lies.

"The path, or rather the way of ascent, — for there is no path, as all traces of a climbing party are speedily lost in the drifting snow, — ran from the Glacier de Bosson over a series of lower shoulders and wound around to the farther side of the mountain, finally passing over that sharp ridge which stands against the sky above the crevasse. Starting early in the morning, we experienced no great difficulty in crossing the ice fields and climbing the slippery slopes, though once or twice we found it necessary to bridge some yawning opening with our ladders, or cross on a frail snow-bridge, that looked as if it might give way at any moment. Only on these occasions had the ropes been used; but as we were about to begin the steep climb along the ridge, word was passed to join in line and make ourselves fast with the ropes.

"The excitement of the ascent had set my blood to boiling, and the idea of being tied to the rope I haughtily disdained. My companions protested, and threatened to give up the climb if I would not allow myself to be joined to them. The guides shrugged their shoulders at my rashness, and pointed out the dangers I must encounter and the terrible death that awaited a slip or misstep. All to no purpose; it was my intention to climb a snow-clad by my own unaided efforts; and climb I would, though the whole company should go back and leave me to go alone.

"I don't defend my recklessness; it was a boy's foolhardiness and love of danger, of which I was well cured before the day was over. At last, finding all protestations unavailing, the party started up, leaving one guide to have special charge of me. We had not gone far up the dizzy cliff, — for the beginning was an almost perpendicular wall of ice, in which each step had to be cut with the ice-axe, — before I would have been glad to have had the rope's assistance. Pride, however, held me firm; and I would rather have perished than have asked for help or appeared in any way to need it. Safely we reached the top of the cliff, and then began a long, toilsome ascent upon the narrow ridge which led up to the summit.

"On this side you can see how the slope from the ridge runs down almost precipitously to the crevasse, and on the other side of the ridge it is even steeper, a clear slide for many thousand feet, ending in a sheer fall into the valley below. The top is only a few feet wide and in places narrows to a few inches. This side, you see, is broken by the line of the crevasse, which lies half-way down toward the glacier. This

ridge was, and still is, a great place for snow avalanches, which start at the crest and slide with accumulating material and increasing velocity until they are dashed upon the ice-sea far below.

"If your sight is good you may be able to see, perhaps two thirds of the way up the ridge, a slight rise, like a large snow heap, outlined against the sky. Yes? Well, when we reached that point the leading guide with the party following continued directly over it and my guide was needed to help cut steps in the ice, leaving me alone for the moment. I saw that a descent would have to be made to again reach the general line of the ridge, and, in my ignorance, I decided that it would be much less difficult to go around the pile than to follow the others over it. So round I started, sinking to my knees in the soft snow that overlaid the ice. I had gone but a few steps when I heard a wild cry behind me, and, turning, saw my guide and the whole party standing transfixed with horror, and their eyes on me. Glancing now at the snow at my feet, I found that the whole mass in which I stood had taken up a slow motion down the slope and I was going with it. Hurriedly I attempted to pierce the ice below with my iron shop alpen-stock and thus hold myself. My efforts were in vain until at last the point caught in a crevice; but the downward motion had become too swift, and the stick was wrenched from my hand. My last hope was gone. With each instant the speed of the slipping mass increased and it began to grow terrific. My courage forsook me, my knees shook and could scarcely support me, my heart seemed to stop its beating. The panorama of my lifetime flashed before me and each second appeared an age. The horror-stricken faces of my friends as I last saw them, and the thought of the terrible story they would carry to my parents and my home, added another agony to the consciousness of my appalling doom, from which it now appeared no power on earth or heaven could save me.

"All this happened in a fraction of the time I have taken in telling you. A moment more would see me hurled a shapeless mass upon the glacier a thousand feet beneath. Another wild scream sounded in my ears, and there darted before my eyes an eagle with outstretched neck and beating wings. Startled, despite my position, in a flash I felt my self-control return and with almost a fierce joy I faced the thought that I was hurrying to destruction. All the pride my birth had given me came to sustain me and make me determined that, even riding an avalanche, an American should be master of the situation, and, if he must, would ride undaunted into eternity.

"I threw one glance about me. The whole side of the mountain appeared to be thundering down before me and rolling over the edge of the precipice on to the glacier. Suddenly I felt a terrific shock, which threw

me forward on to my face and buried me in the snow. Another and another followed, each driving me deeper into the yielding bed. I felt an overpowering pressure on my head, my eyes started from their sockets: I was suffocating; my brain reeled and I lost consciousness.

"In a moment I recovered; the pressure had disappeared and I could no longer feel the motion of the avalanche. Amazed, I tried to free myself from the weight of snow above me, and after a few frantic struggles I found myself on the surface. The terrible excitement had left me powerless; my nerves were unstrung and my limbs failed to support me: I staggered like a drunken man. A great revulsion of feeling swept over me, and from the depths of my being I thanked God that my life had been spared. It was some time before I was able to look about me and discover the means by which I had been saved. I found I had stopped almost on the brink of the chasm. The opening at that point was quite narrow, and the greater part of the avalanche had rushed across it and continued its headlong course down the slope to the final precipice. An immense mass of ice, which had been started some distance before me, had in some manner become wedged in the crevasse and had turned the material following it to one side or the other and occasioned, I suppose, the successive shocks I had felt. My position had been at the upper part of the sliding mass, and, imbedded as I was in the snow, I had survived the stopping of this portion of the avalanche without severe injury.

"It was a considerable time before I was able to recover from the prostration. Feebly I crawled back along the track of the slide for some distance, and then descended by a safe incline, and finally reached the glacier, whence the path hither was well defined. It was late in evening when I reached this house, and you can imagine the reception that I met with. My friends had no thought but that I must have perished, and their joy in finding me alive was such that they even forgave the recklessness which had brought all the terror upon them. You may be sure that I was cured forever of my hair-brained love of danger and reckless disregard for the feelings of others. I have climbed many snow-clads since and have had other narrow escapes, but no scene is so indelibly stamped on my memory as that ride on the avalanche."

My companion was silent for a few moments; then, turning toward me with a smile, he said, "Well, there, you have my adventure. I am always stirred when I relate it, although in the hearing it may be tame enough. Will you have an Havana?" and relighting his cigar, which had died out during the narration, the old traveller sauntered off toward the supper-room.

The Boston Meeting of the Mining Engineers.

THE annual meeting of the American Institute of Mining Engineers was opened at Hotel Brunswick, in this city, Feb. 20.

The first session opened by an address of welcome by Mr. Edward Atkinson, who is the acknowledged leader and representative of the manufacturing interests of the Eastern States.

Mr. Atkinson was followed by Mr. Thomas Doane, President of the Boston Society of Civil Engineers. After a short reply by Mr. R. P. Rothwell, the president, the meeting was formally opened, Mr. James C. Bayles reading a paper on the "Microscopic Analysis of Steel." He enlarged on the fact that, although a great number of physical tests as well as chemical analyses had been made, nothing connected the two series of results; and he thought that the microscopic analysis might serve this purpose when more fully developed.

Dr. T. Sterry Hunt then read a very interesting paper upon "Coal and Iron in Alabama."

After the election of a large number of new members, the meeting adjourned.

The second session was held Wednesday morning, in the Institute of Technology.

Prof. Richards opened with a paper upon the "Peculiarities of Block Tin obtained by Smelting the Residuum after Distilling off the Mercury from an Amalgam of Mercury and Tin."

Mr. H. W. Howe followed with a paper on a "Suggested Cure for Blast Furnace Chills"; and Prof. W. P. Blake upon the "Metallurgy of Nickel."

Mr. A. S. Bower, civil engineer of St. Neots, England, was then introduced, and read a very interesting paper upon the "Bower-Barff Process." The object of the paper was to show what might be done in protecting iron and steel from rust by forming a coating of magnetic oxide upon the surface by an inexpensive process. To Prof. Barff is due the credit of being the first to undertake to coat iron and steel with magnetic oxide for this purpose. His process consists in subjecting the iron and steel articles to the action of superheated steam; and when

they are at temperatures sufficiently high, three equivalents of iron combine with four of oxygen, forming one equivalent of magnetic oxide.

After a series of experiments Mr. Bower found that, by burning a fuel gas similar to that produced by the Siemens generator in a large excess of air, the articles to be oxidized were coated with magnetic oxide close to the iron and a coating of sesquioxide over all. This outside coating might then be reduced to the magnetic oxide by cutting off the excess of air and burning the fuel gas alone.

Each process is good for special kinds of work; thus the Bower process is much quicker for cast iron, while for wrought iron the coating is apt to scale off, unless previously rusted. Steel can be equally well treated by either process.

In the afternoon an excursion was made to the sewerage pumping engines designed by Mr. E. D. Leavitt, Jr. They are compound vertical engines, and have a capacity of 25,000,000 gallons per day. The fly-wheel is 36 feet in diameter, and makes 11 revolutions per minute.

A visit was then made to the Norway Iron Works and the Carson Sewer Excavating Apparatus.

The third session was held in the evening, at the Institute, and was opened with a paper by Prof. W. C. Kerr upon the "Geological Relations of the Topography of the South Appalachian Plateau," followed by Dr. T. Egleston on the "Collection of Flue Dust at Ems."

Mr. A. F. Hill then read an elaborate paper upon the "Shop Treatment of Steel."

On Thursday morning a visit was made to the testing machine at Watertown. After witnessing the testing of a steel bar made at the Norway Iron Works, the party was driven to Harvard University, where the principal buildings were inspected.

The fourth session was held in Boylston Hall, Prof. L. P. Sharples reading a paper upon the "Strength of American Woods."

In the evening nearly two hundred ladies and gentlemen sat down to the subscription dinner at Hotel Brunswick.

'84 Class Supper.

ON the eve of Washington's birthday, about forty members of the class of '84 assembled at the Quincy House to enjoy their second annual supper.

This most delightful occasion is looked forward to with great pleasure, as it is the only opportunity the members have throughout the whole year of being together to have a good time as a class. Great pleasure was expressed in meeting a number of those who entered the Institute with '84 but have since become ex-members.

About quarter past seven work at the table was commenced, and it is needless to say that, for an hour or more, the inner man held complete sway, — hygienic laws being by mutual consent suspended for the evening. Suddenly, while all were bending over the task before them, the real fun of the evening commenced, as the toast-master, Mr. Hardon, arose, and after a few eloquent remarks proposed as the first toast The Institute. This was responded to in an eloquent manner by our class president, Mr. Tyler.

The following toasts were then at intervals proposed: Class of '84, Mr. Rotch; Civils, Mr. Bothfeld; Annex, Mr. Chandler; Chemists, Mr. Chase; Mechanicals, Mr. Baldwin; Ex-Members, Mr. Pratt; Miners, Mr. Bartlett; Rogers Memorial Committee, Mr. Bunce; Architects, Mr. Illsley; Athletics, Mr. Haines; Army, Capt. Weston; TECH, Mr. French; $\Sigma M. E.$, Mr. Appleton; 2. G., Mr. Robinson; Sigma Chi, Mr. Lull.

The responses were full of humor, a great deal of merriment was caused, and the speakers were frequently interrupted by great applause.

Only once during the evening was the party startled by the sound of poetical lines, a miner performing the guilty act in his response to the toast, Department of Mining. The day before it had been noticed that his mind seemed to be wandering, and after the supper he was fondly cared for.

Too much praise cannot be given Mr. Hardon

who officiated as toast-master, the ceremonies being conducted by him in a most pleasing manner.

Surely, all present will look back upon this as one of the pleasantest occasions of their Institute life.

Communications.

It should be distinctly understood that the editors do not hold themselves responsible for the expressions and statements of contributors to this column.

BOSTON, Feb. 23, 1883.

To the Students of the M. I. T.:

Gentlemen, — I hope that Birth-ington's Wash-day was pleasantly passed.

Respectfully yours,

J. H. S. BATES, '85

Athletics.

SPRING is near at hand, and with it the time of our annual spring games once more approaches. The last indoor spring meeting of the M. I. T. A. C. was in every way a decided success, and one of which the Institute may justly be proud.

The games were open to all competitors, and among others the Harvard Athletic Association, the Union Athletic Club, and the Jamaica Boat Club were represented. In all the events the Institute showed herself fully able to compete with such worthy adversaries, and did herself credit; but if this year's games are to be thrown open to non-members of the club, we fear a different result, unless in the time now remaining before the meeting the members of the association put in more solid and regular work than they have done this year heretofore.

The gymnasium is sufficiently well-equipped and large enough to bring out one's powers; and there is surely no lack of good material among the fellows. Despite the loss of several of our best athletes, the association still has men who, with practice, will be fully qualified to sustain its reputation. In order, then, to make our approaching games a success, let the men go into the gymnasium for the next month and see what a systematic course of exercise they can do.

The spring indoor meetings of the Harvard Athletic Association, three in number, will begin next Saturday, March 10, and continue through the two following Saturdays. Already a large number of tickets have been sold and a large attendance assured.

The South Boston Athletic Club tug-of-war team has refused to accept the second medals awarded them at the Union Games of Feb. 5. It is to be remembered that the South Bostons were at first thrown out of the lists on account of being over weight, but, having taken a lighter man from the Union Club, were allowed to pull. After the tugs, which they won, they were, by a protest from the Lynn team, who claimed they had not agreed to the substitute, thrown out of the first medals and only given the second. They now challenge any light-weight team in the State for the State championship and a set of gold medals, the medals to be given by the defeated team.

Department Notes.

ACCORDING to the Reading (Pa.) *Eagle*, a gentleman of Parkesburg, Pa., contemplates the erection of a private mansion, which will be built entirely of iron, except the foundations, which are to be of solid rock. The outside of the house will be painted and ornamented to appear as if it were built of wood. The outside walls will be hollow, and contain pipes through which the smoke and heat from the furnace will pass, thus warming the walls and rooms. In order to prevent the warping which would take place, owing to the contraction and expansion of the iron, there will be breaks in the iron at intervals which will be filled with rubber, so that when expansion takes place there will be room for it without producing any change in the contour of the framework. The rooms will be frescoed and ornamented as if there were plastered walls. The floors of some rooms will be of polished cast-iron tiles, while the mantel-pieces of the parlor and dining-rooms will be of polished steel, handsomely ornamented. The

house will certainly be an architectural and scientific curiosity. The owner admits that it will cost two or three times as much as an ordinary house, but claims that once built it will last for centuries without repairs, and will never cost a cent for insurance.

A novelty in the way of houses has recently been erected at Atlantic City, N. J. The house is built in the shape of an elephant, a winding staircase leading up through one of the legs to a large hall. The windows are formed by the eyes and the ornamentation of the blanket, which is thrown over the animal's back. On top is a pavilion. The trunk is filled with pipes which supply the upper stories with water. The builder has got a patent upon the design, but we hope that few would copy it, even if he had not done so.

The architects are advised to read the article in the *Century* for March on the Architectural League in New York.

At Tufts College, near Boston, a new course in electrical engineering has been established. The course is under the supervision of Prof. A. E. Dolbear, one of the pioneers of the telephone, and eminent for his electrical inventions. This department embraces instruction in wood and metal work at the vise and lathe, practice in running the steam-engine, and an extensive experimental course, with electric and acoustic apparatus, with special reference to the application of telegraphy, telephony, and electric lighting. — *Electrician*.

The *Electrical Review* has published a long article on the course of Electrical Engineering at the Massachusetts Institute of Technology. We thought once of publishing an article on the above subject, but gave it up. The idea seems to have got abroad somehow that our course of electrical engineering is a living reality.

It is reported that the Merchant Venturers Company, of Bristol, England, has resolved to erect, at an expense of \$150,000, a technical school for the use of the Bristol Trade and Mining School, founded through the exertions of Canon Mosely, in 1855.

Noticeable Articles.

THE CORNHILL, February. F. W. H. Myers on Dante, Rossetti, and the Religion of Beauty. "Assuredly," says Mr. Myers, "the 'æsthetic movement' is not a mere fashion of the day, the modish pastime of nin-compoops and charlatans (*i. e.*, Oscar Wilde & Co.), the imitators who surround its leaders, and whose jargon almost disgusts us with the very mysteries of art, and the very vocabulary of emotion. These men are but the straws which mark the current, the inevitable parasites of a rapidly rising cause."

CONTEMPORARY, February. "Contemporary Life and Thought in France," by Gabriel Monod. (Gambetta.) Gambetta, by a German.

FORTNIGHTLY, February. Gambetta, by a friend and follower.

CORNHILL, February. Memories of Gambetta.

THE CENTURY, March. Gambetta, with portrait.

The student of contemporary politics can here look at the famous Frenchman from very different points of view.

FORTNIGHTLY, February. The House of Lords, by E. A. Freeman. A paper suggested by two others on the same subject; one in the *Fortnightly* for May, 1882, by T. E. Kibbel (Conservative); the other in the number for September, 1882, by A. F. Leach (Liberal). Compare also the chapter in that capital little book, "The English Constitution," by Bagehot. Mr. Freeman quotes "the epigrammatic saying of a distinguished American, that the American Senate is as superior to the House of Lords as the House of Representatives is inferior to the House of Commons."

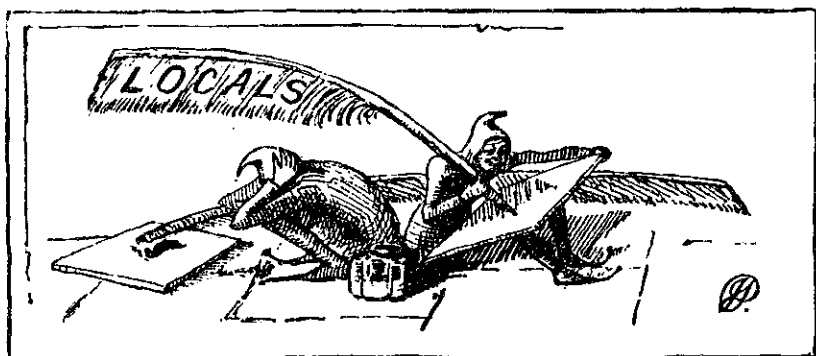
MEXICO AND HER RAILWAYS, by J. Y. Sargent. "To sum up these, all the facts and most of the arguments bearing upon the development of Mexico by means of railways . . . seem to point to a great and successful career for the few great lines already built or partly built, and a bright future of progress and prosperity for Mexico herself."

"THE BEGINNING OF ART, by Stanley Lane-Poole. A review of a very beautiful and valuable new book, "A History of Art in Ancient Egypt," with over six hundred illustrations, from the French of Perrot and Chipiez. "Much of the precision and insight into designs which are displayed in the architectural part of the work are due to Mr. Chipiez, who brings the eye of a practical architect to bear upon the principles of Egyptian building, and whose reconstruction of some of the temples and other monuments are among the most interesting illustrations of a book which abounds in exquisite drawings."

THE student of contemporary history will be interested in a little book just published by Cassell. "A History of the Year—Oct. 1, 1881, Sept. 30, 1882." It contains chapters on Politics, Political Economy, Religion, Science, Art, *Athletics*, etc. It has already reached a second edition.

ENGINEERING students will be interested in the last issue of Harper's Franklin Square Library, "The Autobiography of James Nasmyth, Inventor of the Steam Hammer," edited by Samuel Smiles, who wrote those capital books, "The Life of George Stephenson," and the "Lives of the Engineers." W. P. A.

The chemists may find it worth while to read a paper in the *Chemical News*, Feb. 9, 1883, on the present condition of the soda industry, showing the changes which may take place within a few years in an important chemical industry and the apparently trifling causes which influence such changes. W. R. N.



THE March assessment of the Tennis Club is now due

Finnegan, '84, said he was going down in a *Pullman*.

The V. L. Club is organizing an amateur minstrel performance.

The pictures now on exhibition at Williams & Everett's will repay a visit.

Yale College should be called Golgotha, which means the place of the "skull — and Bones."

Mr. Smith has decided not to take the place as assistant engineer on the P. T. & St. L. R. R.

We notice that the special architects never miss any of Prof. Cross's lectures on color. Why, we will not say.

I. P. Hsley & Co. have doubled the size of their store, and now have the largest retail hat store in the country.

Johnny says he knows what "household gods" are; they are what his pa uses when he puts up the stove funnel.

What is the difference between a lawn sprinkler and a Chinaman? One keeps the lawn wet, and the other keeps the *laun-dry*.

The following was a Virginia statute: Supplementary to an act to amend an act making it penal to alter the mark of an unmarked dog.

The ventilating apparatus of the Physical Lecture Room was tested by the architects the other day and found to be very satisfactory.

The difference between the death of a sculptor and that of a barber may be thus described: one makes faces and busts; the other curls up and dyes.

On account of delays from various causes on one of the railroads, one of the professors seldom arrives at the Institute in time to give his morning lecture.

A gentleman who had conferred a favor upon an Irishman was thus addressed by him: "Long life to you, sir! With the blessing of God, may you live to eat the hen that scratches the gravel on your grave!"

It is rumored that a man was seen at work upon the foundations of the new building a few days ago. He was actually at work, pumping water from one side of a pile of dirt to the other, and five other laborers were standing by to witness the strange phenomenon.

The Rogers Memorial meeting was fairly well attended, and it was resolved to carry the matter through, and erect the proposed tablet. The committee were given authority to order a tablet and collect subscriptions. It is hoped that within three or four months the tablet will be in position in the building.

Quite a surprise was created among the Civils the other morning as Gold '83 came in clothed with a new hat, necktie, and pantaloons. On inquiry it was ascertained that he, while spending a week with his aunt in New York, had decided it would be more becoming to him as a senior to have a little more style.

Prof. Knowlton, of San Francisco, spells potato "Ghoughphtheightteeau," according to the following rule: "Gh stands for p, as you'll find from the last letters in hiccough. Ough stands for o, as in dough. Phth stands for t, as in phthisis. Eigh stands for a, as in neighbor. Tte stands for t, as in gazette, and eau stands for o, as in beau."

Some time since it was noticed that Bob did not show his accustomed interest in lettering. A few think that after his hard and severe labor on his note-book in hydraulics, and then to fail getting the card, was too much for him, — at any rate, he bought his gun and ticket, and has left. Some have the opinion that he thought there was more money in duck-shooting.

We feel sorry to announce that the civils have lost one more of their number. Mr. Lull, of 84, feeling that on account of his eyes he should not always be able to follow the profession of a civil engineer, and being offered a good posi-

tion in a manufacturing business, has accepted, and gone to reside farther East. He is to be congratulated at his fine opportunity, and, being widely known through the Institute, has the best wishes of all for his success.

THE BRUNSWICK MEETING.

The call of the V. L. Club for a meeting on Monday evening in one of the Brunswick parlors to devise means for greater sociality among the students was answered by a good attendance and considerable enthusiasm, especially toward the latter part of the evening.

After the election of a committee to make arrangements for an artistic entertainment, a number of gentlemen were invited to favor the company with some slight exhibition of their talents. Songs with banjo and guitar accompaniments, impersonations, elogs, and performances with the bones brought forth great applause, and gave evidence of talents of no mean order in the direction of fun making.

Mr. Spaulding's performances with the bones were more than astonishing, and called forth prolonged applause. There is, no doubt, a great future before this gentleman.

Toward eleven the meeting adjourned, subject to the call of the committee, and repaired to the Institute steps to carol away the remainder of the evening.

A vote of thanks was passed by those present, to Messrs. Barnes and Dunklee, proprietors of the Brunswick, in recognition of their kindness in giving the use of the parlor for the meeting.

Charles A. Snedeker, '82, for two years a special architect at the Institute, died at his home in Brooklyn, N. Y., on Thursday, the 16th ult., of typhoid fever, after an illness of two weeks. Charley will be remembered by a great many as a jovial, good-hearted fellow, and the notice of his death will be received with regret by all who knew him. He was, up to the time of his illness, draughtsman for his father, who is a large contractor and builder in Brooklyn.



(ONE of the most welcome of the recent visitors to our Exchange table is *Chaff*, from the University of Pennsylvania. A paper which could strike the golden mean between the ubiquity of *Lampy's* humor and the arid pages enclosed between the green covers of the *Dartmouth* can hardly fail to attain the success which its excellence and novelty deserve. The cuts and verses with which the paper abounds are generally excellent, and we recommend *Chaff* to all frequenters of the reading-room. The death of a favorite professor called forth in the February number one of the best editorials we remember to have seen in a college journal, and the following verses:—

Our business is to laugh, you say,
No time for weeping now, i' sooth,
Though sorrow comes, and death to-day
Has ta'en the friend of age and youth.

No time for jesting now? Alas!
Too oft the clown stands by the grave
And mingles dirges with his laughs,
And funeral hymn with ribald stave.

Humor's our role? Do tears not fall
From laughter as from sorrow, then?
Your fool is Janus-faced, and all
Through life shows either side to men.

We have always been awed in the presence of our staid and dignified friend the *Advocate*, and have long ago ceased to wonder how he could always keep his face so straight. He has at last, however, descended to humor, and for the sake of a well-earned reputation, let us hope that he will not find the proverbial difficulty in retracing his steps and returning to upper air. For fine examples of the work of early English wood-engravers we recommend his supplement, which is a strange and unapproachable mingling

of "Iolanthe," "The Inferno," and utter aimlessness.

The recent semi-annual examinations which have been general throughout the colleges have called forth the annual discussion and condemnation of the marking system in its various forms. Generally, however, complaints are numerous, suggestions few.

Harvard and Yale are at it, and each other, again in the familiar fashion. This time it is the boat-race. After much disgraceful bickering, a set of rules to govern such contests has been adopted, and will, it is to be hoped, do away hereafter with such controversies, at once childish and unnecessary.

Clippings.

THIS wail from the *Michigan Argonaut* will be especially appreciated at this time by '85:—

Foul physics is my theme, sir;
Its lover I esteem, sir;
The biggest crank that ever drank
The milk and left the cream, sir.

For when much else there is, sir,
That's full of sense and bliss, sir,
Pray why put up with such a cup
Of bitterness as this, sir?

It drown me with velocity,
And opens my porosity;
Division rules my molecules
With clinical ferocity.

Work and acceleration
Keep me in forced vibration.
The 'ometers and 'mometers
Bring mental aberration.

With prisms and with lenses
My distracted sight it frenzies;
The spectral curse blights me far worse
Than mumps or influenzas.

Just when I think I've tumbled
To that for which I fumbled
Throughout my brains, the prof explains,
And all my thoughts are jumbled.

To suffering I'm incurable
Whenever its incurable;
But such distress without success
Is simply unendurable.

THE TECH.

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14 School Street, Boston.

The rumor that the *Princeton Tiger* will not be able to survive the departure of '83 calls forth this epitaph from the *Argo*: —

“ I am dying, Princeton, dying,
Fast ebbs my fun away;
I am trying, Princeton, trying
To laugh still while I may.

I am sighing, Princeton, sighing;
To smile is hard for me;
Brother Lampy, stop your crying:
I shall cease with '83.”

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Ex.

A Newark (O.) editor is known to wear No. 12½ boots. This is probably the biggest journalistic feat on record. —

Ex.

Extract from a letter by a nine-year-old young lady to her brother in college: "Dicky bird laid an egg yesterday. I guess we'll call him Jenny, now." — *Courant.*

The Harvard Glee Club is going to Chicago during the spring vacation.

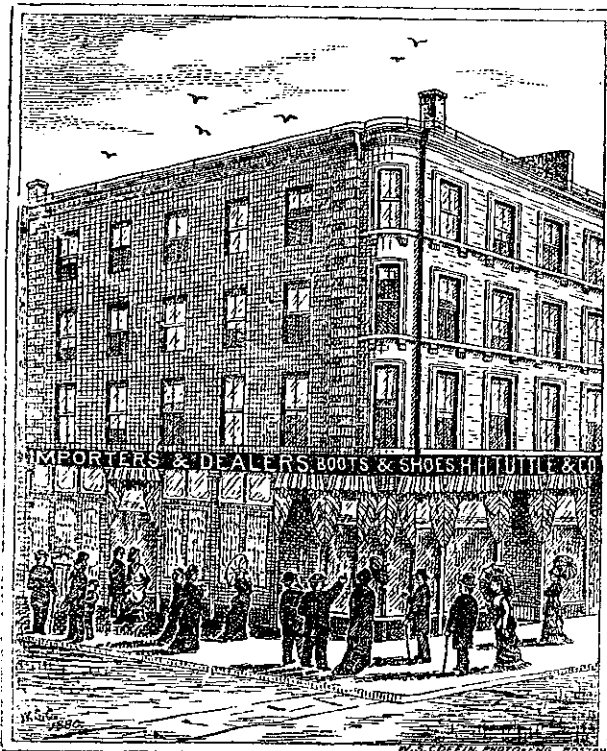
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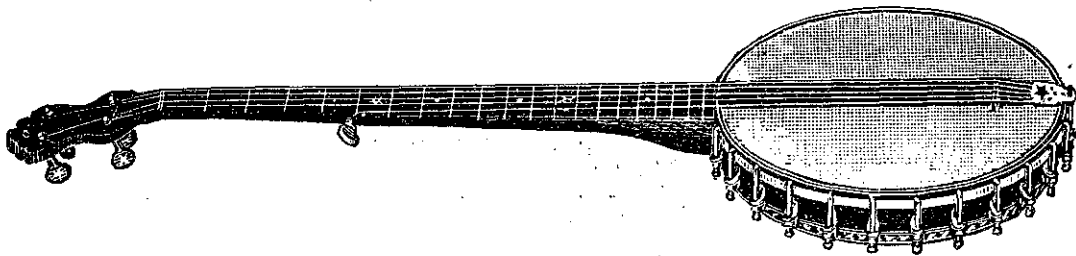
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On Saturday, Feb. 17, the Intercollegiate Athletic Convention was held in New York, ten colleges being represented. The next meeting is to take place on May 26, probably on the New York Polo grounds.

Charlie Vere de Vere (sententiously) — "Geniuses, my dear Miss Marlborough, are men who just miss being fools, and fools are men who just miss being geniuses."

Miss Marlborough (awestruck). — "What original things you say, Mr. Vere de Vere! I sometimes think that you are almost a genius." — *Lampoon.*

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Second annex maid. — "Wait; let's take that red one just behind: they go ever so much faster." — *Lampoon.*

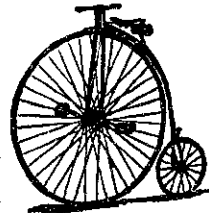
Around her waist my arm I steal.
Gracious! what a thrill I feel
As round her waist my arm I steal.

"George how can you be so rude?
I was never thought a prude,
But such actions I won't stand;
So, please now, take away your hand."

"Now or ne'er," I quickly say;
"Better now than later day;
Mine you must be, dearest Lil."
Shyly she answered, "George, I —
will." HAI..

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If he studied, so they say,
Would he rank; but 'twill not pay
O'er Carlyle he likes to ponder,
With Rousseau in dreams to wander;
And of high art still he's fonder
Verses stuffed with swelling words
Of the songs of fays and birds
On a guitar he twangles,
Serenades of Schubert mangles,
While for compliments he angles
Laziness he calls his forte
Languid grace *au* sublime porte
But that elegance ecstatic
Cannot bring renown Socratic,
Bet your pile!

— *Athenæum*.

AFTER FOUR WEEKS ABROAD.

She thinks America is crude,
For counts and dukes are somewhat rare;
Society's not pleasant where
Tradesmen intrude.
She murmurs in her travelled voice
That in the arts we're very young:
No men of taste have thought or sung
For us by choice.
Our manners, too, are not refined:
We leave our daughters far too free;
Their shocking conduct cannot be
Too much maligned.
Her modesty I quite outraged
By asking her to ride alone.
"No, but I could"—in sweetest tone
"Were we—engaged!"

— *Athenæum*.

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