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The Tech.

VOL. IV.

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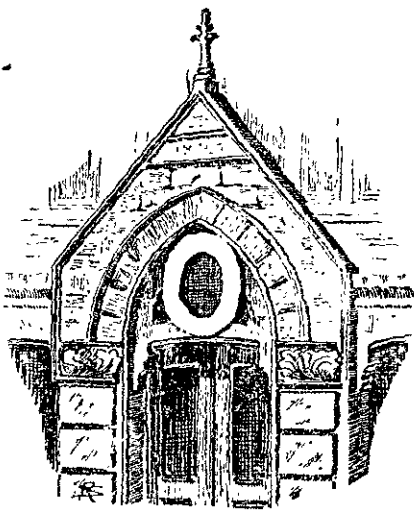
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OUR second term's greeting is, did you pass the semi-annuals? Yes? Accept our congratulations, then, — or, if you failed, our commiseration. The examinations are over; we have recuperated our energies by a recess from our labors, and here we are back again to begin a

new term's work, with great expectations. The examinations were hard, — they always are, — and you all feel better to be through with them, and are glad to begin a new term. The "credit" and the "honor" men return with smiling faces; the men who simply "passed" bless their lucky stars that they ever pulled through at all; while the conditioned men rejoice that it was no worse, and come back with new resolutions. The injured have been carried to the rear; the ranks have been closed up; and now we march hopefully towards the grim and dreadful annuals.

A FORTNIGHT ago the students of the Institute were unanimously engaged in a pursuit which may be loosely defined as a spasmodic attempt to make up for lost time. This time may have been lost through negligence, natural incapacity, or excessive study; of which the first, whether culpable or not, is simple in its effects; the second no less so, since it prevents its victim from employing his time to the best advantage; the third operates on the principle of "the limit of production" in agricultural economy; that is, beyond a certain point additional time spent in intellectual effort will not produce adequate returns; such being the case whenever study hours habitually infringe on the time necessary for sleep and exercise.

It is not our intention at this time to discuss the causes occasioning cramming, which are painfully familiar to most students, or to consider its most successful *modus operandi*, though a paper thereupon might be of interest later in the term; but to simply ask the instructors of this institution, in commonplace phrase, what they are going to do about it. Taking as an axiom that students *will* cram, is it the part of the teacher to discountenance the practice as conducive to a *laissez faire* system of study during the term, or to assist the despondent seeker after essential knowledge, however late his search? It might seem that this inquiry was superfluous, but shortly before the semi-annuals a professor, who had been shifting all over a ponderous text-book, and adding thereto voluminous comments, on being asked what parts of both the class were to be held responsible for, replied brusquely, "The time for these things is when you go over them." Very true, but hardly pertinent; and what if you had not been able to grasp all "these things" when you did go over them? Such deficiency might be due to no fault of your own, and at least the

questioner should have the benefit of the doubt.

In contrast with this gentleman's sentiments, it is pleasant to note the liberal conduct of another professor who, after placing upon the blackboard a syllabus of the term's work and a former examination paper on the same ground, invited, at his last recitation, all pupils who still found knotty points in their way to make a brief report of the same and drop it in his mail-box early enough to give him time to send them an explanation before the day of examination.

This, in our opinion, is the true method of procedure. The objection that a student who has, by cramming, successfully atoned for the negligence of a term, will, by imperceptible degrees, come to depend on that last (legitimate) resource, just as a man in the habit of borrowing gets to depending upon loans to carry on his business, — this objection will, we think, have but little weight in the minds of those who have often, in the midst of a tedious spell of digging, mentally kicked themselves for the negligence which caused it.

In the case of a student who, through some of the many causes previously enumerated, has fallen behind his class by no fault of his own, what is to others the dismal necessity of cramming becomes to him, in a measure, an indispensable hope and invaluable refuge. If he then finds the necessary aid grudgingly given by his instructors, such an attitude not only inclines him to "retaliate" by the use of illicit assistance during examination, but tends to revive the old "natural enemies" doctrine, still existing in some colleges, and to undermine those friendly and cordial relations between teachers and pupils which have always been one of the pleasantest features of life at our institution.

IN another column will be found a communication concerning the unreasonable length of some of the recent examinations. This is one of the evils resulting from the plan of continuing a course of lectures through a whole term, with no intermediate examinations, and then ex-

pecting a student to show, by his answers to a single set of questions, his knowledge of the whole term's work; of course such an examination must be as thorough as possible, and consequently of great length. This plan was objected to in an editorial in No. 4 of THE TECH; it is only necessary to repeat that the result of a term's work, in any subject taught entirely by means of lectures, should be determined partly by intermediate examinations, combined with the results of the semis or annuals.

Harrowing.

We sat upon yon mossy bank,
The troubled world was all forgot;
The blinking stars peeped out, then sank
In halo 'round the moon's bright spot.

The gentle breath of nature fanned
The locks from off my brow,
The thrilling touch of her fair hand,
Alas! I feel it now!

"Oh, sweet, my love, be mine," I cried,
"My treasures, love, abode —"
She screamed, and flitted from my side,
"Oh, — oh — that — horrid — toad!"

E. PITHET.

A New Theory.

THE following may be of interest to some of our geologists, and may throw light on many phenomena which have heretofore never been satisfactorily explained. It will at least open a new field for investigation and experiment. It is a letter written from Cloyne, Ontario, to the *Mining Review* of Chicago. The writer has evidently been magnetized by the north pole: —

"In my last letter I promised to give good geological reasons for my belief in the existence of great mineral wealth in the northern part of Ontario and Quebec, and in dealing with such a subject it becomes necessary to take geology in connection with terrestrial magnetism.

"The earth is a magnet, and is constantly performing all the functions of a magnet, on a scale proportioned to its bulk and volume, the north pole being the *positive* or absorbing pole, and

the south end the *negative* or pole of crystallization. Here then we have the active force which accounts for the northward movement of the earth *en masse* — the constant and reiterated rush of the great tidal waves of the ocean always coming from the south, but never returning thither by any currents visible to us. The trees, fruits, and other products of the tropics are found plentifully on the shores of Spitzbergen and Baffin's Bay; but no product of the arctic regions is found in southern latitudes, unless carried there by man. The change of latitudes, too, is another great witness to this theory. We know the popular idea about the precession of the equinoxes being the apparent cause, but that is erroneous; and were it not for being too elaborate we could expose its errors. Besides, if that were the cause, even apparently, it would run in *cycles*, like everything else connected with astronomy; but in the change of latitudes there is no returning movement. Surveys made two or three thousand years ago have been changing their latitudes ever since, and always to the north. But the most striking phenomenon illustrative of this is found in the coal formation. At Bogata, in South America, right under the equator, there is a large coal field. In Greenland, too, way up in the Arctic Circle, there is plenty of coal; and it is a fact well known to geologists that the coal of Greenland contains precisely the same fossil plants as the coal of Bogata and Pennsylvania and Newcastle; a proof that they all grew under the same climatic conditions. No sane man will suppose that the tropical plants, huge trees, and ferns forty feet high, found in the carboniferous strata, ever grew amongst the snows of Greenland. The fact is that the 'rocks' containing the coal were formed in climates nearer to the sun, viz, within the tropics, and by that all-pervading and permeating force which has its firm hold on every particle of matter in the whole body of the earth, have been moved to their present positions on their way to their final dissolution and oxidation within the converging currents of terrestrial magnetism in the polar circle, where, resolved to their first elements, they

are caught in the returning current through the earth's axis and carried back to the *negative* pole of crystallization at the south, to pass through another cycle of useful changes and combinations in the economy of nature."

There is something profoundly soul stirring in the thought that we are being slowly but surely absorbed by the north pole, only to be carried back in an amorphous condition to the south pole and there recrystallized and made to pass through the same humdrum "cycle of useful changes," which we thought we had already passed with credit. The first cycle might prove very interesting to the voyager bent on investigation, but when it came to the bicycle and the tricycle around the world, the most enthusiastic wheelman would undoubtedly grow weary.

To Phyllis.

Prettie Phyllis, charming Phyllis,
What o'er me casts such a spell
When I see your dainty figure,
Fairest Phyllis, can you tell?
Can it be your bright eyes dancing,
Or your lips of ruby red;
Is 't your smile, sweet and entrancing,
Or your prettie, dainty head?
Prettie Phyllis, charming Phyllis,
Less than half your charms could move,
But, perhaps, the simple reason is,
Dearest Phyllis, you I love.

A Curious Episode.

THE gas was burning low as Bob Morrison and I returned to our room about ten o'clock, after a most charming call on our old friend Grace Leeland. She had come East and was making a visit with some friends on Commonwealth Avenue, and considering that she was a prominent member of "our set" at home, I had at last succeeded in dragging out Bob with me to call. I may almost use the term with literal truth, for of all fellows in this world, Bob was, I think, the most unsusceptible to feminine charms. Everybody said that I was just the opposite; but that's neither here nor there.

Well, on this particular night, it being rather

late, we did not feel much like tackling the books, so we got out the meerschauts and had a quiet smoke before turning in.

"I say, Bob, are you aware that the Senior ball comes off in just a week from to-night?" I remarked after nearly half an hour of silence.

"Um — yes, I suppose so, and being Seniors it's no more than right that we should go, though I'd much prefer to stay at home."

"Now, Bob, you're making a regular bachelor of yourself before your time. If I did n't pull you out by main force, you would n't get in half there was going in a social way. If you had any style at all, you would take a girl to that ball, now for instance, instead of going there alone, and polishing your dress coat against the wall all the evening. I'm as good as booked for that Miss Adams, the one I took on the sleighing party last winter, you remember. Now the only proper thing for you to do is to invite Grace Leeland, being an old school friend, you know, and she'd make a regular *furor* among the boys. Trot her out, and show them that St. Louis can produce as pretty girls as Boston."

"Your picture, though strongly drawn, is lacking in attractiveness, my learned adviser, as the art critic would say. Imagine my taking a girl, Jack! Would n't it make the people at home stare?" Then, after a pause: "I'm not at all sure but that I may come to it some time, old boy. But I'm all smoked out, and it's eleven o'clock. Let's go below." And after shaking the ashes from his pipe he proceeded to disrobe.

.
BOSTON, April —, 188—.

"Miss Leeland accepts with pleasure Mr. Morrison's kind invitation to the ball [but knowing his peculiarities is somewhat at a loss to know how to account for it.]"

This was the perfumed billet that was put into Bob's hand as he entered Rogers on the afternoon of the fourth day after. By this note it is evident to the reader that Bob's idiosyncrasy, if such it may be termed, was a well-known fact among his lady friends. The fact

is, Bob was a favorite in spite of it all, and when once he was drawn out of his shell, no one would have taken him for a woman hater.

As he read the above note, an expression of perfect amazement came over his face, which had not faded therefrom when he reached the drawing-room. He made straight for my desk, grasped me firmly by the collar with one hand, and with the other thrust before my eyes the paper, demanding at the same time an explanation.

"So you've been writing her an invitation in my name, and without my sanction or foreknowledge! A clear case of forgery, I'll be bound."

"Not so fast, my boy," said I, loosening his grasp, "I've done nothing of the sort. Don't jump at conclusions before you know the premises. I think I have sufficient material, however, from which to throw light on the subject, which I will endeavor to do later. Observe now that you have unceremoniously interrupted me in my problem of estimating boiler pressure."

Bob always used to enjoy keeping *me* in suspense, so I thought I would try the same on him. He saw that I would n't tell him then, so he left me and went industriously to work.

At supper we had no opportunity for conversation on the subject, and not until we had gone up to our room had a single word been said about it.

After we went up stairs Bob stirred the fire, and before lighting the student lamp, he carefully closed the door and backed up against it, as if he thought I would attempt to escape. Then, with a melodramatic gesture that would have frightened Booth himself, he cried out, —

"Now, as you value your life, base wretch, reveal to me this mystery!"

"My dear fellow," said I, "a long explanation is inevitable, so you had better sit down in that easy-chair and take things comfortable. In the first place, you must know that somnambulism is a subject that has long defied the investigations of scientists, and —"

"Oh, bother your scientific bosh! Come

down to plain English and tell me what has occurred!"

"Well, then," I continued, "you must remember that before retiring, last Thursday night, we were busily engaged in discussing the important subject of the Senior ball, and talking over our pleasant call on Grace Leeland. Well, in the middle of the night, I was awakened by a slight noise in the room, and, on opening my eyes, was surprised to find the gas burning, and you sitting calmly at the table, with a pen in your hand, and with head bent down, as if in deep study. I spoke softly. No answer. Then I remembered your old habit of walking in your sleep, and determined to watch your actions. At the same time, I remembered the curious statements made in that book we were reading only the other day, about how people had been known to do strange things in sleep, such as solving problems, answering questions, writing letters, etc. Then the idea occurred to me that I would test their accuracy, which both you and I were inclined to doubt at the time, so I got up softly and sat down opposite you at the table.

"Your eyes were open and fixed on the paper before you. I then told you to write as I dictated, and happened to word aloud a correct invitation to Grace, which, to my surprise, I confess, you immediately wrote out. I then told you to seal and address the note, which you did. I found that you would do anything I directed, but I was all the time afraid that you would wake up suddenly, so I ordered you off to bed, and you obeyed like a valet executing his lord's commands. It was nuts to order you around (you know you never would have stood it if you had been awake), but it did seem kind of weird and ghostly to see you sitting there without a word, writing out everything I said.

"But now comes, perhaps, the funniest part of all. I thought I wouldn't say anything to you about the matter until you had found the note, which I thought you would see on the table in the morning, and which I determined to prevail on you to send. But, as you remember, we were late to breakfast and had to hurry

off to applied mechanics right afterwards, so you didn't see it. When we came in to dinner the note was gone, and I immediately guessed where. On making inquiry, I found that the chambermaid, seeing the letter sealed and directed (you had put it into one of those stamped envelopes), had posted it, thinking you had forgotten it.

"It was too late then to ward off the catastrophe, so I resolved to await the result in silence. It is really the best joke I ever heard of, and now, by Jove, whose fault is it? It surely is n't mine, and you couldn't think of blaming the chambermaid. You'll have to consider it the result of one of the strangest chains of circumstances that ever happened."

"If I didn't know your brain was incapable of making up such a story in cold blood, I should more than half believe you were lying to me. But I suppose I must accept it as the truth, and I'm not so sure after all as I am sorry. Don't, for Heaven's sake, let it out among the boys, though, or I'll never hear the last of it. I *thought* you couldn't be guilty of writing the note yourself, and I've been turning it over in my mind all the afternoon trying to account for it. Yes, it's a good joke." Then looking at this watch by the fire-light, "Gad, man, its after nine o'clock, and if we're going to get in any work to-night, we'd better light up, and go at it."

Thus it happened that Bob surprised all his friends, and as a sequel it might be added that he "did" the ball in good style, hack, flowers, and all; moreover, not to this day does Grace Leeland suspect the true reason of Bob's unwonted freak.

A. E. L.

Students who saw unhappy-looking members of '87 roaming around with straw hats on and shoe-strings for neckties just before the semi-annuals, must not think that their heads had been turned by excessive study, and that the former articles were to cool their heated brains, and the latter to hang themselves with after the examinations were over. No, they had only just been initiated into a new secret society.

Behind the Press.

WE often meet, both in reading and conversation, such expressions as "the natural influence of his wealth," or, "the influence which his possessions gave him," and similar phrases, all conveying an idea so common and generally understood as to scarcely create any impression on the mind, the reader or hearer giving an unconscious assent in his thought to the implied assertion, and passing on without further consideration of a proposition which his instinct, perhaps, tells him is almost an axiom. Yet, if we were to stop him abruptly with the question, "In what way can wealth exert the greatest amount of influence?" he would probably require a few moments' reflection, — reflection which would skim lightly over the normal and essential influence of riches, bringing him finally to the one specific mode, which is the answer to the question, and causing him to reply, "Through the press."

This is, indeed, the answer. However such prestige may have been five hundred years ago, whether more warlike or more patriarchal, *now* the most influential man is ordinarily the one who owns the whole or part of one or more periodicals. When we think how the crowded thoughts go into a thousand homes and whisper clearly and regularly with all the privilege of an old-time friend, how a single magazine may stand to members of a whole family for all their knowledge or conception of literature, science, and art, we are startled at the power which modern ingenuity sometimes puts into the hands of a single man.

But there is another side to the picture. If we consider how many journals are owned by stock companies, and how easy it is for a shrewd and wealthy man to obtain a controlling interest in such a company, we cease to wonder why so many periodicals that have made themselves obnoxious to persons, corporations, or political juntas, possessing large resources, have suddenly come to untimely ends. I have heard a very interesting account illustrating this last point, given by an authoress well known through the United States.

One of the first, if not *the* first, literary magazine of America was obliged to discontinue not long ago under the following circumstances: —

At the time when the company publishing it was incorporated, two registries should have been made (under the laws of that State) in two different departments of the State government. By some mistake or neglect, only one was made, and the omission was not discovered until a year or two had elapsed, when it was found only by the treasurer of the company, who owned a controlling interest in the stock, and was a personal friend of the editor. It was thought that this defect might in some way invalidate the title, and although this eventually proved not to be the case, the treasurer proposed confidentially to the editor to take advantage of the alarm caused by this flaw, and that they two should perform what is technically known as "freezing out" the other stockholders.

The editor was a more than ordinarily high-minded man, but was also, unfortunately, a very quick-tempered one, and, acting on the impulse of the moment, promptly knocked down the proposer, and the editorial sanctum became the scene of a rough-and-tumble combat.

The result may be easily foreseen. The former friends were, of course, friends no longer. The treasurer was a very wealthy man, and swore that he would sink every dollar he had in the magazine rather than let its present head continue to conduct it. After less than six months' hopeless struggle against superior capital and proprietorship, the editor, who is one of the most popular of our later novelists, gave up the contest, and the magazine was stopped.

The stockholders lost every dollar they had invested, and the American people lost one of their best periodicals, — all on account of the power which wealth gives rascality to abuse.

This is merely an illustration of one phase of the problem, — how can a man be prevented from taking advantage of the "accidental wealth" to acquire more power than he is mentally or morally entitled to, without infringing on his personal liberty? — a problem as old as property itself, but apparently as far from solution now as ever. L.

Noticeable Articles.

THE *Contemporary* for January has a most entertaining paper on Dr. Johnson, by Augustine Birrell, author of that very bright little volume of essays entitled "Obiter Dicta." It is a pleasant contrast to Lord Macaulay's shallow performance, and contains, amongst other things, a witty comparison between Boswell and Mr. Froude as biographers. "Boswell's book," he says, "is an arch of triumph through which, as we read, we see his hero passing into eternal fame. Froude's book is a tomb over which the lovers of Carlyle's genius will never cease to shed tender but regretful tears." "If we ask why it is that the reader of Boswell finds it as hard to help loving Johnson as the reader of Froude finds it hard to avoid disliking Carlyle, the answer must be that while the elder man of letters was full to overflowing with the milk of human kindness, the younger one was full to overflowing with something not nearly so nice." "After buffeting one's way through the storm-tost pages of Froude's 'Carlyle' in which the universe is stretched on the rack because food disagrees with man and cocks crow, with what thankfulness and reverence do we read once again the letter in which Johnson tells Mrs. Thrale how he has been called on to endure, not dyspepsia or sleeplessness, but paralysis itself." Let me say, by the way, that the new edition of Boswell, edited by Napier, and now included in five volumes of "Bohn's Library" is said by the critics to be the best of all editions of that best of all biographies.

The *Contemporary* also contains a paper on the German Colonial Movement by Baron von der Brüggén, one on Contemporary Socialism, by Prof. Thorold Rogers, and a perfectly authentic and most interesting narrative of the escape of a Russian political prisoner from Siberia to Switzerland. M. Gabriel Monod, in his paper on Contemporary Life and Thought in France, discusses, among other things, the Franco-Chinese difficulty.

The *Nineteenth Century* has a paper on the centenary of the *Times*, long the greatest of London newspapers, which reached its hundredth birthday on the first of this month. Though not the power it once was, it is still one of the great leading journals of England and of the world. There is also a paper which will interest a great many readers of THE TECH, on "Cycling and Cyclists," by Viscount Bury.

In the same magazine the "Confessions of an Eton Master" is a severe arraignment, the fruit of eighteen years' experience, of the present condition of that venerable relic of mediævalism, the greatest of the "Great English Schools." "It is not," he says, "mere idleness that reigns supreme at Eton so much as a *strenua inertia*, — a busy sloth, — which with much bustle and profession effects practically nothing, and by the exhibition of its own worthlessness, drives the boys more and more to the worship of athleticism, that great deity of the youthful mind." "It is vain to point to additional school

hours, an increased number of exercises, examinations without end, and a general show of scholastic activity; the mournful fact remains, that under the present system little *is* taught and *can* be taught." "A serious mistake is made in aiming at an impossibly high standard of classical teaching, the whole system of which seems to be based on the assumption that every boy is capable of being made a scholar or a grammarian. Accordingly, the dullest and most backward boys are plunged, together with the cleverest, into that great vortex of mistaken and unsuccessful teaching, from which emerge ninety-nine blockheads to one scholar." This is what outsiders have been saying for a long while, but now the same word comes from the *inside*.

W. P. A.

The first edition of the *Century* for February is 180,000 copies, which is the largest number of *Centuries* ever yet published. The most notable article among its contents is Gen. Grant's paper on the battle of Shiloh. This is a most valuable contribution to history, and is attracting great attention, since it is, practically, the first report which Gen. Grant ever made of that battle. The "War Series" is a great feature of the *Century* this year, and is proving to be a very valuable addition to our history of the Civil War. Gen. Grant will contribute three more papers, while others will be written by Gens. McCellan, Longstreet, Rosecrans, Admiral Porter, and others. The next in the series will be the "Monitor" and "Merrimac," by Col. John Taylor Wood, now senior surviving officer of that memorable fight.

Among the other contents of the magazine are instalments of three serials, a twenty-four page story from Mark Twain's forthcoming book,—"Huckleberry Finn," —and "A Florentine Mosaic," which is one of Mr. Howells's charming sketches. Henry James begins a new novel entitled "The Bostonians." The midwinter *Century* has been characterized as an "ideal magazine."

M. I. T. '84.

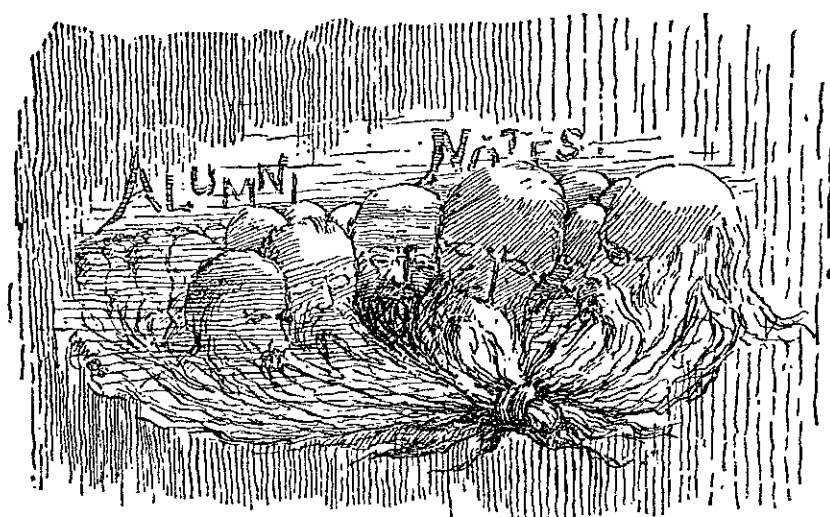
The Annual Meeting will be held at Young's Hotel, Boston, on Saturday, Feb. 21, 1885, at 6 P. M. Members desiring a dinner, at \$2.00 a head, will please communicate immediately with the Secretary, and if enough names are obtained a dinner will be held at the time and place of the meeting.

Notice is given of a proposed amendment to the Constitution, to omit Section 4, Article IV., concerning the holding of a special meeting upon the death of any member of the class.

The assessment for 1885 is \$1.00, which, together with the sender's address and occupation, should be sent at once to the Secretary, if the next Class Directory is desired.

A. LAWRENCE ROTCH,
Secretary and Treasurer.

3 COMMONWEALTH AVE., BOSTON.



S. M. Felton, Jr., '73, has lately been elected vice-president of the Erie Railroad.

J. H. Allen, '81, has been on a visit to Boston, and has returned to Pueblo with a wife.

Col. Cheong Mon Cham, '81, Chief Engineer of Mines, Hotel Ha Sing Kong, China, care of Wei Yak, Esq.

F. E. Came, '81, is at present engineer in charge of the erection of New Railroad Cantilever Bridge at St. John, N. B.

Frank Graef Darlington, '81, has become the father of a promising boy and is happy. Mr. Darlington is engineer maintenance of way, on the P. C. & St. L. Railway, vice-president of Eagen Telegraph and Electric Co., and junior member of A. S. C. E.

John Duff, '81, was for a short time assistant superintendent Brookline Gas Works, but resigned.

F. E. Kidder, '81, has published a book entitled Architect's and Builder's Pocket Book.

George A. Mower, '81, during the last year has been to England as agent and representative of the Ashcroft Steam Gauge Co.

F. C. Noble, '81, is now East at home, but will soon return to Nebraska.

Geo. G. Saville, '81, in connection with Edwin J. Lewis, Jr., has started an engineering and architectural office.

Artemus L. Tyler, '81, is travelling in Europe.

Herbert A. Young, '81, appointed chief engineer of the T. C. & L. L. R. R., of which he has been principal assistant and acting chief engineer for some time.

List of Publications, M. I. T.

MASS. INSTITUTE OF TECHNOLOGY. Twentieth Annual Catalogue of the Officers and Students, with a statement of the course of Instruction, etc., 1884-85. Pph. 8vo, pp. 150. Boston, 1884.

—— President's Report, Dec. 10, 1884. Pph. 8vo, pp. 20. Boston, 1884.

BROOKS, FRED. (Certif. '70). The Theory of the Polar Planimeter. *Jour. Assoc. Eng. Societies*, III. (1884), 294-298.

GREENE, CHAS. E. ('68). Shaft-sinking by Freezing. *Science*, IV. (1884), 443.

HOWLAND, ALBERT H. ('71). The Metric System and our Society. *Jour. Assoc. Eng. Societies*, IV. (1884), 12-14.

MINOT, CHAS. SEDGWICK ('72). The Laboratory in Medical Science (Editorial). *Science*, III. (1884), 172-174.

—— An International Scientific Association. *Id.*, III. (1884), 245, 246.

—— Proceedings of the Section of Histology and Microscopy, A. A. A. S., Phila. 1884. *Id.*, IV. (1884), 342, 343.

—— Comment on Microscopical Technique. *Id.*, IV. (1884), 350, 351.

—— Psychical Research in America. *Id.*, IV. (1884), 369, 370.

—— Death and Individuality. *Id.*, IV. (1884), 398-400.

—— Comments and Co-operation in Science. *Id.*, IV. (1884), 411.

—— Zur Kenntniss der Samenblasen beim Meer-schweinchen. *Arch. für mikros. Anat.*, XXIV. 211-215.

NICHOLS, W. R. ('60). On Iron as a material for purifying portable Water. *The Sanitary Engineer*, X. (1884), 220.

NORTON, L. M. (Certif. '75) with B. O. Prescott. Continuous Etherification. *Am. Chem. Journal*, VI. (1884), 241-246.

PRESCOTT, C. O. ('84). See L. M. Norton.

PICKERING, W. H. ('79). Measurement of the Speed of Photographic Drop-Shutters. *Science*, IV. (1884), 454.

—— Method of measuring the absolute Sensitiveness of Photographic Dry Plates. *Proc. Amer. Acad.*, XX. (1884), 159-162.

WALKER, FRANCIS A. (President). Industrial Education, read before the *Amer. Social Science Association*, Sept. 9, 1884. Pph. 8vo, pp. 16.

The following titles should have been noticed before.

HUNT, ALFRED E. ('76). The Colorimetric Determination of combined Carbon in Steel; read October, 1883. *Trans. Am. Inst. Min. Engineers*, XI. (1883).

MINOT, CHAS. SEDGWICK, ('72). National Traits of

Science (Editorial). *Science* II. (1883, 455-457. Also, in *Nature*, Oct. 25, 1883; *Revue Scientifique*, Nov. 17, 1883.

——Heitzmann's Microscopical Morphology. *Science*, I. (1883), 603-605.

ORDWAY, JOHN M. (Prof.) Non-conducting Coverings for Steam Pipes. *Trans. Am. Soc. Mech. Engineers*, VI. (1884).

Communication.

[The editors do not hold themselves responsible for opinion expressed by correspondents.]

TO THE EDITOR OF THE TECH:

We had always understood that three hours was the limit for all examinations at the Institute, but the action of some of the professors during the recent semis goes far toward dispelling all such ideas. When a professor says an examination will end at twelve o'clock, but gives so much on the paper that the majority of the men in the section cannot do anything like justice to the questions in the allotted time, but have to stay from half an hour to an hour beyond, and even then cannot do all they could if there were more time and they were not completely worn out by four hours' steady work, when this happens it seems to us that such a paper is manifestly unfair and altogether too long, and that it is very unjust to the men taking the subject. This was particularly true of two examinations on two consecutive days, both given by one professor

'85.

The College World.

HARVARD. — Señor Don Juan Valleria, the Spanish minister, has signified his intention, through the Spanish consulate at Boston, of presenting a number of rare volumes of Spanish history to the University. This gift is made in memory of an enjoyable visit which he recently made to the college. — A handsome cup for rifle shooting has been presented to the Shooting Club. — Prof. Alexander Agassiz has gone to the Sandwich Islands on account of poor health. — The total valuation of the property of Harvard College which yields an income is estimated to be about five million dollars. — There are twenty-one editors connected with

the *Crimson*, either in an editorial or business capacity. — Of the 1,617 students in Harvard, 968 are from Massachusetts. — The following-named ministers have been invited to preach in April: Rev. R. Heber Newton, Rev. Brooke Herford, Rev. Phillips Brooks and Rev. A. P. Peabody.

YALE. — Prof. Benj. Silliman died recently. — It is said that \$4,000 has been subscribed to the Navy by the three under classes, not including Sheffield.

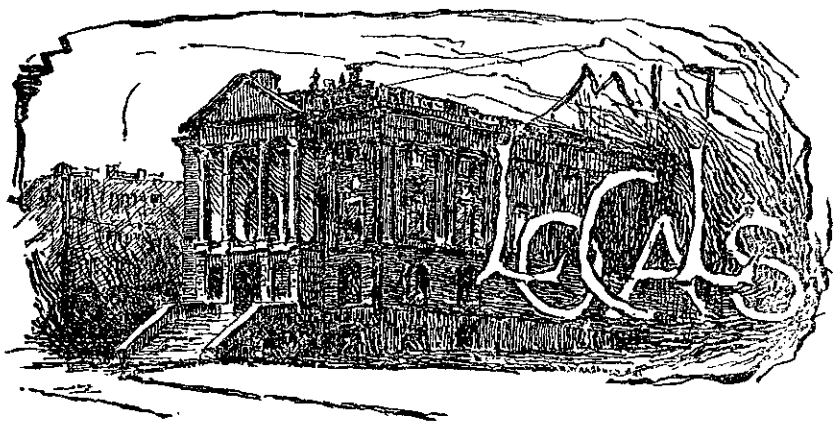
COLUMBIA. — Twelve men have gone into training for the crew, and good hopes are entertained of turning out a crew able to compete with Harvard successfully. — Cane rushing appears to be an important part of the course at the School of Mines. A midwinter rush is the latest feature

PRINCETON. — Owing to the mildness of the winter the men practising for the nine have for some time been able to practise on the campus. — Princeton is to make great efforts to retain the lacrosse championship next spring.

IN GENERAL. — The University of Pennsylvania is endeavoring to raise \$50,000 for a gymnasium. \$10,000 has already been secured. — Peterhouse College, the oldest of the seventeen colleges in Cambridge University, England, has just celebrated the six hundredth anniversary of its founding. It was founded in the reign of King Edward I. — *News*. — Syracuse University is to receive an endowment of \$40,000 for a new professorship. — Clarkson, of the Chicago's, has been secured to train the Dartmouth nine.

THE TECH likes to see items from its columns clipped by its exchanges, but it also likes to receive credit for them, and does not like to see them remodelled by other exchange editors. A list of the number of students at the various colleges, which is evidently the one published in TECH No 6, has been going the rounds, but the figures have been altered in several cases, including that of the M. I. T. itself.

As our list was prepared, either from the current year's catalogues or by direct correspondence, we are confident that it is correct.



Here we are again!

Did you hug your girl?

The question of the hour, — Did you pass?

The circulation of THE TECH this year is six hundred.

Have you seen the menagerie in the biological laboratory?

C. H. Woodbury, '86, has a prize picture at the Art Club exhibition.

The young lady most often spoken of at the armory: *Carry Arms*.

The Juniors have a course of lectures from President Walker this term.

Everything in the mining laboratory is being overhauled and every surface that will take paint is being painted.

Now the weary miner begins to make estimates of how many years it is going to take him to finish his quantitative work.

The notes in third year physical laboratory, formerly papyrographed, have been printed, and are for sale in the supply-room. — Papyrographs must go.

Messrs. O'Grady and Zerrahn, former students at the Institute, won the second prize (\$3,000), for designs for the new Boston Public Library.

A senior was so excited at the receipt of his report, last Thursday, that in the evening he attended a dance with three stockings on two feet, showing a brown one and a blue one.

Mr. A. Lawrence Rotch, '84 — a former editor of this paper — read a paper before the last meeting of the New England Meteorological Society.

Rehearsals of the Glee Club, in anticipation of the next concert, begin immediately; the first one is to be held this (Wednesday) afternoon at the usual time and place.

What more touching sight is there than to see a couple of Freshmen shaking each other's hand like pump-handles, so happy to meet again after the long separation of seven days.

Class in descriptive geometry. Prof. (reading examination marks): Well, gentlemen, I am surprised!

Entire class (in chorus): So were we, sir.

The time test in the applied mechanics laboratory is conducted by the senior architects, Messrs. Homer and Benton; the test began Jan. 19, to continue about four weeks.

It is said that beer is good for the voice. We shall now cease croaking about a lack of college spirit, as it is evident that a large percentage of TECH students are industriously training for the Glee Club.

It has been discovered that the Institute man who excused himself from a society meeting on account of *pressing* business, went to see his girl. We have never yet found an Institute man who excused himself on false pretences.

CB₃A. — The inaguration dinner of this society took place at the Quincy House on the evening of Jan 17. After dinner a club poem was read by one of the members, and then music and singing filled up the remainder of the evening.

On Thursday, the 22d, which was the extremely cold day, quite a party of Techs went skating on Jamaica Pond. The results, as reported by one of the sufferers, were quite disastrous. Burlingham had both feet frozen(?), Wilson both ears, Jones both ears, Carter one ear, Tuttle one ear, and two unknown '87 men one ear each. The above report is probably exaggerated though founded on facts. The true state of the case can not be ascertained until after vacation.

Several second-year men promised their friends suppers at Young's on condition that

they got "credit" on all of their examinations. Let it be recorded to their credit that they have stuck manfully to the *conditions*, but their friends are still supperless.

A few of the fourth-year Civils accompanied Mr. G. L. Blodgett to Fitchburg, on Saturday, Jan. 16, to witness the working of the electric signals and apparatus there. Mr. Blodgett has been lecturing before the Civils and Electricals on the application of electricity to railway working, for two or three weeks.

Conversation overheard on a Tremont Street horse-car:—

First Irishman: "Soy, Pat, and whot the divil is a cyclorama?"

Second Irishman (after a moment's thought): "Sure, Tim, me boy, that's only the new dude name for a gas-house."

Active preparations are going on in the assaying laboratory for the reception of the third-year men at the beginning of the term. As a mere matter of form, bottles for silver residues are placed in each desk, for it is a well-known fact that silver residues are not abundant after a semi-annual vacation.

A repetition of Mr. Putnam's lecture on Sanitary Plumbing was given before the Civils and Architects on Friday evening, Jan. 9, the attendance at the preceding lecture being so large as to exclude the Institute men. The lecture was principally on the different kinds of traps, their various failings and merits being discussed and shown by experiments.

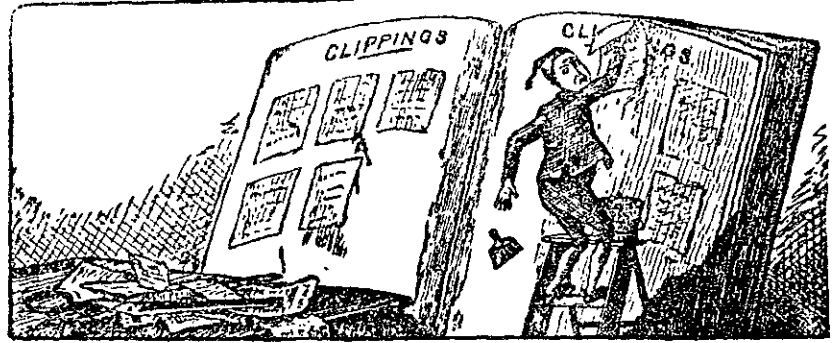
BLOOD WILL TELL.

Miss Albion (on a visit here).—So our great-grandfathers were brothers? Indeed, I did not think you had such things over here as great-grandfathers.

Mr. Y. Doodle.—Well, you see I was so anxious to claim relationship with you that I looked the old gentlemen up.

Miss A.—And what did you find?

Mr. Y. D.—I found that they were green-grocers.—*Life*.



Of Uncertain Age.

A maiden of uncertain age

Of ancestry was wont to brag;
When that attention would engage,

The conversation would not flag.

"One of my ancestors," said she,

"Came on the Mayflower." "Can it be?"

Asked one "T is a distinction great.

Why, 1620 was the date."

"Pray tell me," slyly asked another,

"Was it your father or your mother?" *Ex.*

The buzz-saw has an off-hand manner.—*Puck*.

Was n't it a bit suggestive to print in a policeman's obituary notice the line, "He sleeps his last sleep"?—*Ex.*

An awkward compliment.—*Lieutenant* (to elderly lady): Madam, really, to-day you look as fresh and blooming as a rose of twenty years.—*Dutch Paper*.

Mrs. Parvenu explains that she thought Mamelade such a pretty name when she saw it on Delmonico's bill of fare, that she gave it to the baby instead of Mary Ann, as first proposed.—*Ex.*

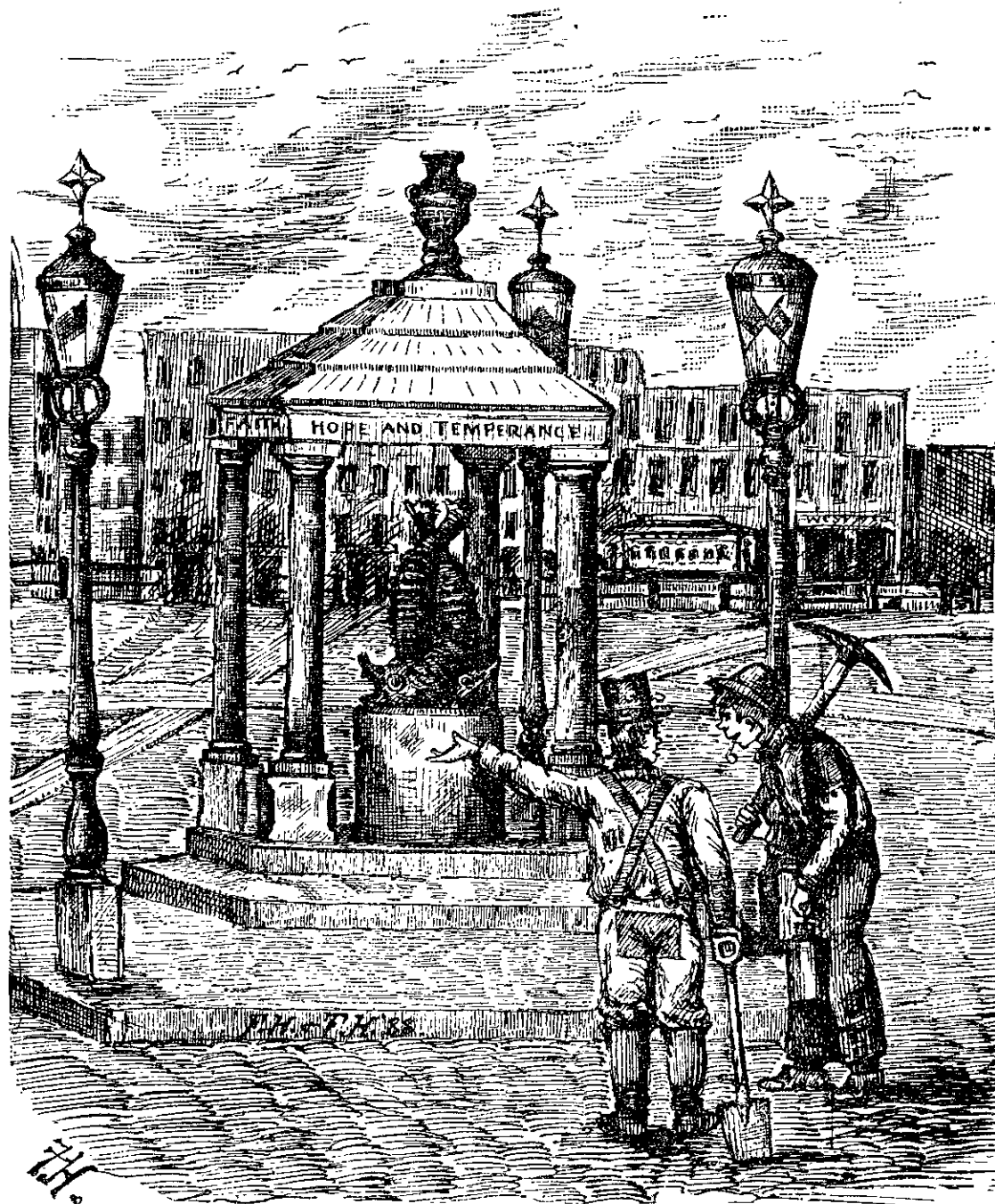
Lieutenant.—"There is nothing like presence of mind. One day in battle, a soldier near me had four of his teeth knocked in by a rifle ball, which would have surely passed through his spinal column and killed him had he not, with rare presence of mind quickly swallowed the ball."—*Fliegende Blätter*.

AT THE CONCERT.

Miss Stockunbond.—"What *are* they playing?"

Enthusiast.—"Siegfried's death, you know, by Wagner."

Miss S.—"What did he die of? It must have been fits!"—*Life*.



AT THE FOUNTAIN.

First Irishman: "Sure, Pat, and whot's that?"

Second Irishman: "Mick, me boy, sure I think that's to commerate the death of Jim Blaine."

First Irishman: "Indade (*reading the words around the top*)! 'Faith, Hope,' — *faith*, but I don't think there is much *hope* for him now; and 'Timperence,' — be gorry, Pat, but that looks as if Jim was going to try the St. John ticket."

TO BE UNDONE.

Yes, you may kiss me once,
Just once, not even twice;
You wicked wretch, you gave me two —
No, no, it is n't nice.
You have your orders, sir,
Once, only once, I say;
How very strange, you cannot count,
Now, sir, will you obey?
Just understand me, please,
I told you only one,
And if you do me out of four,
They'll have to be undone.

Ex.

Lady to Hackman — "How much did you say I have to pay?" "One dollar." "What's your number?" "Fifty cents, you mean, stingy old fraud!" — *Texas Siftings*.

NOBILITY AT A DISADVANTAGE.

Stolid proprietor of German restaurant, to new waiter. — "Dot letter fer you, eh? You was der Baron von Schinkelberg?"

New waiter, meekly. — "Yes, mein Herr."

Stolid proprietor. — "Den you vas n't no reck-ular waiter, eh? Vell, I dake a dollar a veek off your vages." — *Puck*.

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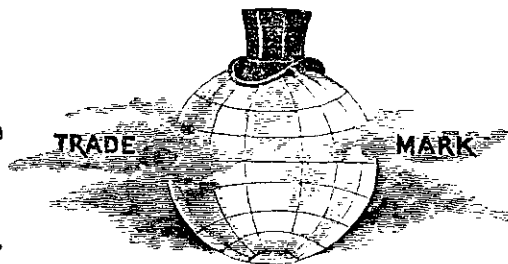
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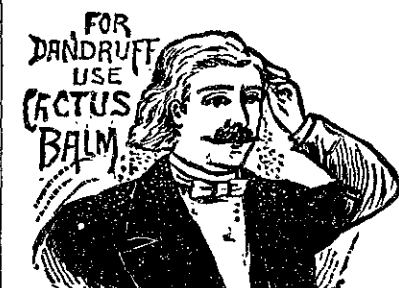
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H. H. Tuttle & Co., Thayer, McNeil & Hodgkins, and H. A. Winship. Frost & Adams (20 per cent).

Their advertisements may be found in another column.

The order at the recent '88 drill party deserves mention, being tastefully printed in Tech colors, and bearing on the front a well-drawn Cupid with rifle, M. I. T. cap. and Freshman-like aspect, in the correct position of parade rest. Unfortunately, through a mistake of the printer, only a small percentage of the number ordered was printed, consequently a large proportion of the dancers were obliged to dispense with these art souvenirs.

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Thatcher, Primrose & West's Minstrels occupy the boards at Boston Theatre this week. It is the second week of their engagement, and various changes will be made in the programme. The company gives a performance which is attractive, and introduces much that is new, a performance which draws the best class of theatre-goers.

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Besides the above distinctly professional courses, the Institute offers scientific courses of a less technical character, designed to give students a preparation for business callings. A four years' course in biology, chemistry, and physics has been established, as preparatory to the professional study of medicine.

Modern languages are taught so far as is needed for the ready and accurate reading of scientific works and periodicals, and may be further pursued as a means of general training.

The constitutional and political history of England and the United States, political economy, and international law are taught, in a measure, to the students of all regular courses.

Applicants for admission to the Institute are examined in English grammar, geography, French, arithmetic, algebra, and geometry. A fuller statement of the requirements for admission will be found in the catalogue, which will be sent without charge on application.

A clear admission paper from any college of recognized character will be accepted as evidence of preparation, in place of an examination.

Graduates of colleges conferring degrees are presumed to have the necessary qualifications for entering the third-year class in any of the regular courses of the Institute, and will be so admitted provisionally, on the presentation of their diplomas.

The feature of instruction which has been most largely developed in the school is laboratory training shop-work and field practice, to supplement, to illustrate, and to emphasize the instruction of the recitation and lecture room.

Surveying instruments are provided for field work in civil and topographical engineering. Extensive shops have been fitted up for the use of both hand and machine tools; and a laboratory of steam engineering has been established as a part of the instruction in mechanical engineering. Several steam boilers and steam engines of various types are available for experiments and tests. The department of mining engineering and metallurgy has the use of laboratories in which the milling and smelting of lead, copper, silver, and other ores, in economic quantities, are regularly performed by the students themselves. The classes in architecture supplement the work of the drawing and designing rooms by the examination of structures completed or in course of erection, and by practical experiment in the laboratory of applied mechanics, testing the strength of materials and working out problems in construction. The Kidder Chemical Laboratories, just completed, contain desks for four hundred and twenty-six students, and afford the best modern facilities for the study of general, analytical, and organic chemistry. The Rogers Physical Laboratory has been greatly extended in every department during the past year, especially in respect to facilities for instruction and research in electrical science.

On the successful completion of any one of the four-year courses of the Institute, a degree of bachelor of science will be conferred. The Institute is also empowered to confer the degree of doctor of science. Special students are allowed to enter special divisions of any of the courses, on giving evidence that they are prepared to pursue with advantage the studies selected.

The Institute of Technology, as a recipient of a portion of the United States grant to colleges of agriculture and the mechanic arts, gives instruction in military tactics.

The fee for tuition of students taking the full course is \$200 a year. Besides this, \$25 or \$30 are needed for books and instruments. There are no separate laboratory fees. Only payment of articles broken is required.

Attached to the Institute are also two special schools: viz., the "School of Mechanic Arts," and the "Lowell School of Industrial Design." The former gives a training in the use of tools, together with elementary mathematics and drawing. English, French, and geography are also taught in this school. The fees for tuition are \$150 a year. The Lowell School teaches the making of designs for prints, carpets, wall-papers, laces, gingham, and other woven goods. A weaving department with a variety of looms is connected with this school. No charge for instruction is made.

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In thus receiving instruction from different teachers, each a specialist of long experience, an earnest pupil may be sure of sound and symmetrical training. This method of dividing the work of preparation for the Institute has been satisfactorily practised at Chauncy Hall for years.

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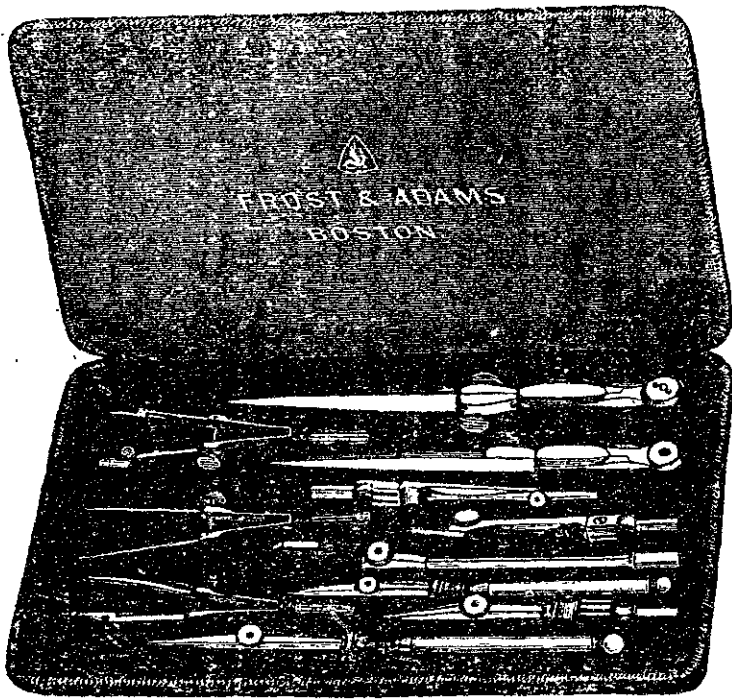
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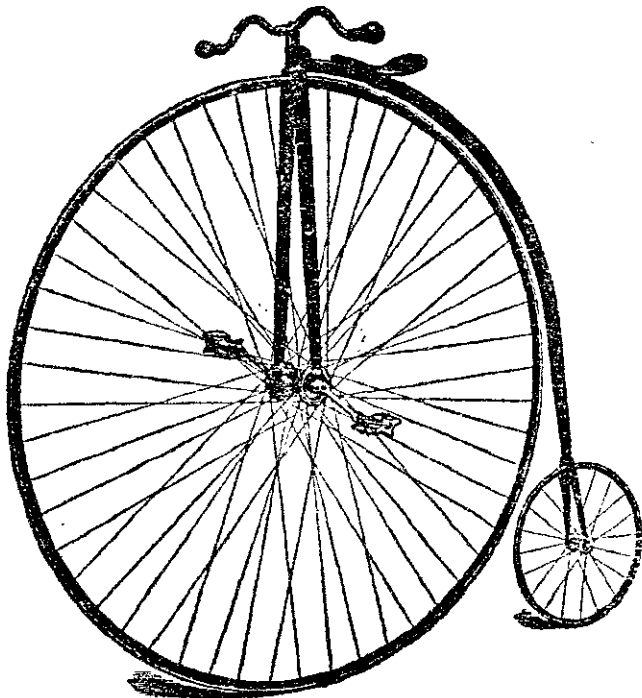
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