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The Tech.

VOL. II.

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No. 7.

THE TECH.

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

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THE policy of those who control the finances of the Institute appears to be, to put off as long as possible the purchase of apparatus for instruction, promising to make the necessary expenditures "all in a lump," after the school is established in the new building. From the students' point of view, it is difficult to see the necessity or justice of this policy. To the students, especially those who are approaching the end of their course at the Institute, the completion of the new building seems a long way off, and they cannot but feel that at least a portion of the money now being expended in building operations could be spent to better advantage in improving the present courses of instruction. The students who are here to-day, and who have helped to make the Institute what it is, have a right to expect that the management should do for them everything in its power, and that the interests of possible future students should not be regarded before the interests of those who, by their attendance, have already contributed to the success of the institution in which we all take a justifiable pride.

It is well known that much in the way of apparatus, etc., is needed for properly carrying on the work of the school, and the want of it will never be more keenly felt than now. The above is illustrated by the spectacle of students in mechanical engineering spending time and money in procuring apparatus which the Institute can and should furnish, and the lack of which deters many from experimental work which might be of great value. It does not look well for an institution like this to go a begging for apparatus which a few hundred dollars would purchase. As another illustration, we might mention the large number of students, who, at the beginning of the year, were anxious to take up electrical work, and who were deterred by lack of apparatus. This apparatus must be purchased next year; why not purchase it now? Lack of means can no longer be pleaded as an excuse for parsimony. We have received a generous donation, amounting to nearly \$100,000, from the late Mrs. Henry Edwards; and though we understand that the amount is not immediately available, the Institute can have no difficulty in procuring the sum required for our present needs. We trust that due regard will be had for the sentiment of the students in this matter, which so closely concerns their welfare.

AS a number of students have been heard to express the desire of knowing something about the "Sigma Gazelles," we thought it would be appropriate to say a few words regarding this body. The society, although the oldest in the Institute, perhaps, has not until the present time been very conspicuous, mainly for two reasons: the first being on account of the comparatively few members, and the second on account of the great secrecy.

It can now, however, boast of a goodly num-

ber; for, as the Institute itself has been gradually increasing in numbers, so likewise has our society.

One of the main causes which led to its organization was the desire of a number of students to make frequent excursions, in a body, to various points of interest in connection with their studies, thus gaining considerable practical knowledge, together with the enjoyment to be had on such occasions. During the past fall the "Gazelles" have made many excursions to places of geological interest in the vicinity of Hyde Park, and a grand excursion is anticipated during the vacation between terms.

At the last meeting of the society, held at its rooms on Washington Street, it was voted to admit six new members during the present school year.

All regular students of the Institute are eligible for membership, and any one desirous of becoming a member may obtain information from the secretary, Frank O. Gold.

YE editors having devoted their holidays and many days preceding, to evolving such frivolity and facetiousness as would be for the gratification of ye multitude of subscribers, have thereby disarranged their usual train of lugubrious scientific thought, and they find it necessary to arrest, for the time being, this too violent flow of humor, that the more solemn tone of the paper may again assert itself. They therefore intend to take a short recess and permit the paper to run itself for an issue or two, until the present turbidity of the technical rivulet becomes somewhat cleared

Comparative Speed of the Fastest Trains in Europe and America.

ABSTRACT OF PAPER READ BEFORE THE S. M. E. SOCIETY, DEC. 5,
1882, BY A. L. ROTCH, '84.

IN considering American trains, I shall take into account the acceleration which has occurred within the last few years. For England my data is brought down to 1880 and on

the Continent it is as old as 1878, but, generally speaking, my figures are sufficiently accurate to-day to warrant comparison. In selecting representative trains, I have given preference to those which maintain the highest speeds for the longest times.

The fastest train in the United States, and one which falls little below the fastest English trains for the same distance, is that on the Pennsylvania Railroad, which runs from Jersey City to Philadelphia, 88.4 miles, in one hour fifty-two minutes, including three stops, or at the rate of 47.8 miles per hour. Jersey City to Germantown Junction, 84.2 miles, is run in one hour forty-one minutes, including one stop, or 50.5 miles per hour. I timed, last winter, the fastest train in the opposite direction, whose schedule time is one hour fifty-nine minutes. The train consisted of five cars, and it was five minutes late on arriving. The fastest miles were run in 63 seconds each=57 miles per hour. This train used to run in five minutes less time, and the fast train west was two minutes quicker when started a few years ago, so perhaps it was found impossible to maintain these higher speeds.

The 4.30 p. m. train, New York to Boston, via Springfield, is the fastest train between the two cities, taking six hours three minutes for the 234 miles, or nearly 39 miles per hour. I timed this train last fall, when it kept exactly to the schedule. There were six cars. The fastest run, on the New Haven division, was 1.9 miles in 2 minutes=57 miles per hour; but, owing to the Connecticut law requiring a stop at every draw, the average speed to New Haven, including the six stops, was only 38.5 miles per hour. Excluding the stops, the time for the 234 miles was five hours thirty minutes, and the running speed 42.5 miles per hour. Last summer the Shore Line train used to run from Boston to Stonington, ninety-three miles, in two hours one minute, including a stop at Providence, or 46.1 mile per hour. In 1881 I timed this train to Providence as follows: Left Albany Railroad Crossing 1.03 p. m. Beyond Foxboro', the speed was 57 miles per hour. Before reaching

Pawtucket, 14.9 miles had been run in $17\frac{1}{2}$ minutes=54.5 miles per hour. Providence, $43\frac{1}{2}$ miles, was reached at 1.59 p. m. Speed from the crossing, 47 miles per hour. There were five cars, and the engine had $5\frac{1}{2}$ -foot drivers. The fastest train on the New York Central is from New York to Albany, 142 miles, in three hours thirty minutes, without a stop=40.5 miles per hour.

These figures should, I think, be sufficient to show that regular trains in this country seldom cover a mile in sixty seconds, though there is much loose talk about running sixty miles an hour. It has been said that it is impossible for an engine with $5\frac{1}{2}$ -foot drivers to make a mile a minute. In England I timed the Scotch express, fifty-nine miles per hour, and it is said on good authority that it is not uncommon for English express trains to make sixty to seventy miles per hour; but there driving wheels eight feet in diameter, coupled or uncoupled, are used.

In England there are so many fast trains running at nearly the same speed that it is difficult to name the fastest, but the following are at least among them:—

The "Flying Scotchman" (via Gt. Northern) runs to Edinburgh, 397 miles, in nine hours, including stops, or 44 miles per hour.

The Great Western Railway has a 7-foot gauge and its "Flying Dutchman" is still perhaps the fastest train in the world. It runs from London to Exeter, 194 miles, in $4\frac{1}{4}$ hours, which, excluding 20 minutes' halt on the way, is 49.5 miles per hour.

The Leeds summer expresses on the Great Northern run $186\frac{1}{4}$ miles in $3\frac{3}{4}$ hours, or 49.4 miles per hour, including two stops. Grantham to Wakefield, $70\frac{1}{4}$ miles, in one hour seventeen minutes, is 54.7 miles per hour. This last is claimed to be the fastest run in the world. In America there is nothing which compares to these trains.

Many of the French expresses are fast. I believe the fastest long distance run is from Paris to Bordeaux, 359 miles, in nine hours ten minutes, or over 39 miles per hour. Excluding

the seventeen stops, the average running speed is 42.5 miles per hour. I do not think this performance is equalled with us.

Taking Germany and Austro-Hungary together, we find the fastest trains in North Germany. Probably the fastest goes from Berlin to Hanover, $158\frac{1}{2}$ miles, in three hours forty-eight minutes, with two stops, or 41.7 miles per hour, which is also not surpassed in America. This is part of the through line between Berlin and Paris, and is, perhaps, the best example of a very long-distance train abroad. The distance is 668 miles, accomplished in $22\frac{1}{4}$ hours, or about 30 miles per hour, notwithstanding the fact that three countries are traversed, with custom-house formalities at the frontiers. On account of these delays, this is beaten with us by the New York-Chicago trains, which average some 35 miles per hour for over 900 miles.

In Italy, the only quick train is the mail, which goes from Bologna to Brindisi, 472 miles, in 14 hours 55 minutes, including three stops, or 31.5 miles per hour. This train is largely due to English enterprise, as it carries the English mail and takes only through passengers.

In Switzerland and Russia there are no trains exceeding 27 miles per hour. In Belgium, some travel as fast as 42 miles per hour, but these are generally the through trains between France and Germany, and may be considered with the trains of those countries.

Thus it will be seen that the speeds of the fastest Continental trains about equal our own, except for very long runs, where we have the advantage.

The members of the classes in mechanics spending Christmas away from home were entertained by Prof. Lanza, assisted by his mother and sister, on Saturday evening, Dec. 23. There were present Messrs. Bardwell and Paddock, '83; Ilsley, Kerr, Callahan, Sturgis, Fitch, Baldwin, Rich, and Bunce, '84; also C. M. Wilkes, '81, last year's assistant in mechanics. The company broke up about 11.30 p. m., after a most delightful evening.

About Candy.

MR. EDITOR. — Some time ago your correspondent, moved by a desire to find out how candy is made, visited the establishment of Chase & Company, and was kindly permitted to enter and investigate. At the top of the large building on Washington Street, devoted to this delightful branch of manufacture, is received the raw material, which is chiefly sugar from the Boston refineries. This is boiled in large copper kettles heated by steam pipes, where it is stirred and beaten by suitable machinery, and converted into syrups and pastes of various colors, flavors, and degrees of consistency. The thinner syrups are mostly run into moulds, — *cast*, as it were, — the process reminding one of a diminutive kind of foundry work. The moulds are made of powdered starch, which is put into shallow wooden boxes, and struck off level on the top. The patterns, which are made of plaster of Paris, are arranged on the under side of a board, and pressed down upon the starch, leaving a series of impressions into which the syrup is poured. The moulds are then stacked up, in immense drying rooms heated by steam, and left until the sugar has crystallized. It is quite an art to regulate this crystallization; for example, in "wine drops," where it is desired to crystallize the outside and leave the inside liquid.

The contents of the boxes are next emptied into a large sieve moved by machinery, which sifts out the starch, and, at the same time, a workman plies a pair of bellows, to remove all traces of it from the candy. This part of the process seems to call for improvement, as the fine starch dust fills the air of the room and whitens everything upon which it settles, not only causing waste and discomfort, but may become a source of actual danger. Several disastrous explosions in candy factories have been traced to this cause. The workmen in this department were dressed entirely in white, presenting a tidy appearance. At that time the business was rushing, in anticipation of the holiday trade, and candy enough was stored in

the building to make an inestimable number of Freshmen happy. (We know this because we sampled all the varieties, from chocolate creams to the hard nut candy, requiring good teeth for its enjoyment.) There are many processes to be seen here which we have not space to describe. One that is conspicuous for the noise it makes is the production of almond balls and various little hard oval pieces, which is done in what look like immense iron pots tipped on one side and revolving on their axes, so as to roll the pieces of candy over one another, rounding and polishing them, as pebbles are polished on the sea-shore. The machine for stamping out lozenges is quite interesting, also the making of sticks of candy. The paste for the latter is put into hoppers and forced by a large screw through holes of the right shape, the sticks being carried along on an endless belt until they can be cut into the required lengths.

Another process carried on here is the coating of tissue paper with paraffine, for use in wrapping up caramels. On a large table in one room was spread out a large flat sheet of sugar paste dotted all over with inscriptions, such as "I think you are horrid!" "Kiss me quick!" etc., which your correspondent opined was to be cut up into so-called "conversation lozenges," by means of which the minds of the young are educated to carry on an interesting and spicy conversation. We looked around to find the distinguished authors who are employed to compose these legends, but without success. X.

C. C. M. I. T.

THE battalion has now been divided into companies, the officers appointed and assigned to their positions, and work begun in earnest. The large entering class has increased the number of companies to three, which will make the drill much more interesting than in years past. Much valuable time was lost at the beginning of the year on account of the moving of the Gymnasium, which it will be hard to make up for. However, with a set of efficient and painstaking officers, and good stock in the rank and file, the

prospects for the future of the battalion are indeed good.

The following is the roster of the corps of Cadets for the years 1882-83:—

Major, — CHARLES R. RICHARDS.

Adjutant, — ARTHUR H. BROWN.

Quartermaster, — CHARLES H. BARTLETT.

Sergeant Major, — CHARLES A. BROWN.

Q. M. Sergeant, — P. RUSSELL FLETCHER.

COMPANY A.

Captain, — SIDNEY WILLIAMS.

First Lieutenant, — JOHN G. HOWARD.

Second Lieutenant, — ALBERT E. LEACH.

COMPANY B.

Captain, — NATHANIEL G. ROBERTSON.

First Lieutenant, — ROLAND G. GAMWELL.

Second Lieutenant, — CHARLES C. DOE.

COMPANY C.

Captain, — FRANK L. LOCKE.

First Lieutenant, — ROBERT R. GOODRICH.

Second Lieutenant, — ELWOOD J. WILSON.

Athletics.

THE Gymnasium Committee, by means of the proceeds of the lockers, together with a slight pecuniary gift from the Faculty, have been able to make a contract for some new pieces of apparatus, and the gymnasium will soon receive an addition of a number of sets of new pulley-weights, another horizontal bar, several giant pulleys, swinging rings, and other apparatus.

At a recent meeting, the Intercollegiate Foot-Ball Association made some necessary changes in the rules. Hereafter the safety touchdown will be the unit of scoring. A touchdown equals two safeties, a goal kicked from the field equals five safeties, and a goal kicked from a touchdown equals six safeties. In case of a tie on other points, the side scoring two more safety touchdowns than its opponent will be awarded the game;* otherwise it will be a draw. This renders the safety game useless, and will make the future collegiate play more like the English Rugby Union game. Hereafter two warnings, instead of three, will disqualify a player, and warnings will be given

* Each side scoring on opponent's safeties. — Eds.

for unfair tackling or for jumping on an opponent when down. In punting out from a touchdown the kicker is allowed six feet on the goal line.

The M. I. T. A. C. is trying to make arrangements with the Union Athletic Club to have them postpone their games, which are announced for the latter part of January, until after the semi-annual intermission, when the Institute men would have an opportunity to enter. That the request is not without reason, the work done by our men at their former games plainly testifies. Since the inauguration of the U. A. C. games the M. I. T. A. C. has always sent a number of men to their contests, and the records of our tug-of-war teams, together with those of E. T. Sturgis (pole vaulting) and others clearly show, not without success.

The class of '86 entered the Institute with over two hundred men, and thus far no class, at least for a number of years past, has furnished so small a number who take part in athletics. '86 had better brace up and look after her laurels.

The Faculty of Princeton College have adopted a set of very stringent rules governing the playing of base-ball and foot-ball by the students out of town, only eight absences per term being allowed the men.

Mr. W. F. Burriss is prepared to receive pupils in boxing or general physical training. Terms easy. For further particulars apply at the gymnasium between 4 and 5 P. M.

It is estimated that at least two thirds of the whole number of students at Harvard University take exercise in some form or other in the gymnasium.

Noticeable Articles.

THE official report of experiments made by the committee appointed to consider the dynamo machines and electric lamps exhibited at the Paris Electrical Exhibition of 1881 is published in *La Lumière Electrique* for Nov. 16, Nov. 23, Dec. 2, and Dec. 9, 1882. A valuable series of papers upon the application of electricity to lighthouse illumination is also appearing in the same journal.

C. R. C.

Department Notes.

THE Seniors have almost finished the sketch problem of a memorial fountain, and a new one has been given out. It is a design for a small private museum situated within the park of the owner. The rendering is to be done in monotone, as there will not be time to finish it elaborately before vacation. The thesis work has been assigned to the Senior architects.

The third-year men are at work upon their first problem in designing a porch for a city house, upon which every class has, so far, exercised its inventive faculties.

The bowling alley recently started in the architectural drawing-room will be closed on and after Jan. 1, 1883, as the receipts were not enough to pay for the damages to the furniture, etc.

The theatre in the Architectural Library will reopen on the 1st of February, with the following attractions: The O'Reilly Brothers will be present and introduce several new songs and dances; and the orchestra, under the guidance of a famous Orangeman, will play the accompaniments in their usual charming manner. We have also secured the assistance of "Bend off," the famous scout from Omaha, who will give a specimen of the true Indian war-whoop and show his skill in throwing the tomahawk. Performance to begin promptly at 3 P. M. Come early and avoid the rush!

Mr. Wilcutt did his cupelling last week.

The miners are advised to read the article on "Hydraulic Mining" in the January number of *The Century*.

Mr. Tompkins has spent the past week in leaching his zinc ore with sulphuric acid, and evaporating the product to a pulp.

The room where the lectures in geology and mining are held was transformed into a sleeping apartment during Mr. Wilcutt's night runs.

The miners of '83 have just found out that those who have not finished their proof analysis

by the end of this term will be conditioned in chemical work. If this rule is carried into effect, most of them will begin the second term with a condition.

S. M. E. is talking of another excursion.

The fourth-year students in mechanics have visited the Watertown testing machine.

Three of the principal iron and steel works in New England are introducing the Jarvis system in their puddling and heating furnaces.

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It is an important feature of the Brush storage system as now perfected that the battery can be charged from the same wire used in furnishing arc lights. The company, it is said, will supply the batteries with the Swan lamps at about the price of gas. Col. William E. Barrows, president of the Willimantic Linen Company, the first large concern in New England to make use of the electric light, was so much impressed with the success of the battery that he ordered one for use in his works. — *Commercial Bulletin*.

A correspondent desires to know if a Corliss engine can cut off later than one half of the stroke. Possibly a little later; but on all engines of this class the tripping device which releases the cut-off valve must do so, if at all, before the piston reaches the middle of its stroke. After the valve is released, however, it takes a little time for it to close. We do not know how much the time of cut off may be affected in this way, but when the engine is moving at a tolerably quick speed the delay from this cause would probably be appreciable at least. We hope some of our readers will enlighten us on the matter.

The custom of running underground electric wires cannot be too greatly encouraged. Already accidents, more or less severe, according to the conditions, are reported in New York, where electric lighting wires have come in contact with wires leading to the fire-alarm boxes. Last week, while a fireman was releasing a key from an alarm box, he received a shock which nearly knocked him down. So much electricity passed into him that his right arm was rendered useless for several minutes. The pavement was dry at the time. Had it been damp, the shock would have been greater, because his body would have been a better conductor between the alarm box and the ground. The possibility of being killed suddenly while sending out an alarm or releasing a key is not a pleasing thing for firemen to contemplate. Several Boston companies have made a commencement in laying underground wires and have done so with very satisfactory results. Let the good work go on. — *Com. Bulletin.*

C. E. Illsley, in the *American Architect*, states that the white incrustation which so often disfigures brick walls, especially of new buildings, consists chiefly of sulphate of magnesia (epsom salts), a substance which is very soluble in water and which tends to effloresce on drying. M. William Trautwine of Philadelphia, who has experimented on these incrustations, believes the sulphate to be produced in the bricks, and to a less degree also in the lime

used for mortar, during the process of burning, by the action of the sulphurous acid, generated in the combustion of bituminous coal containing iron pyrites, on the magnesia in the clay and in the limestone. The coating is washed off by the rain, and unless the bricks are especially charged with magnesia it will, in time, cease to appear. Bricks burned with wood or coke fuel are, so far as known, free from this defect. It is recommended, therefore, that only wood or coke be used in burning bricks intended for fronts. The lime also should be burned with wood, or else obtained from pure limestone, containing no magnesia. English Portland cement is said to be free from this substance.

In the system of electric illumination of trains, recently adopted on the Eastern Railway of France, there is a Gramme machine, driven by the locomotive and accumulators. M. Tommasi has introduced an "automatic interrupter," the action of which is to break all communication between the Gramme machine and the accumulators, when the speed of the train descends below the normal. Further, if the lamps are lit at such a time, or when stoppage occurs, the automatic apparatus substitutes the accumulators for the machine, or reciprocally; the moment of change is not perceptible. When the train is running without the lamps being lit, the Gramme machine charges the accumulators exclusively; when the train is lit, the machine feeds both the lamps and the accumulators. It is only when the illuminated train slackens speed by stops, that the accumulators supply the current required by the lamps, and this is restored when the train has resumed its normal speed. Thus the accumulators are not so cumbersome as if they had sufficient capacity to feed the lamps during the whole journey. There is a Swan lamp in each compartment. The train is lit by the guard on entering a tunnel. The cost for an ordinary train of thirty-six lamps is about twelve francs a day, whereas the lighting with oil cost thirty-six francs, and was very imperfect. — *English Mechanic and World of Science.*

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C. E. Illsley, in the *American Architect*, states that the white incrustation which so often disfigures brick walls, especially of new buildings, consists chiefly of sulphate of magnesia (epsom salts), a substance which is very soluble in water and which tends to effloresce on drying. M. William Trautwine of Philadelphia, who has experimented on these incrustations, believes the sulphate to be produced in the bricks, and to a less degree also in the lime

used for mortar, during the process of burning, by the action of the sulphurous acid, generated in the combustion of bituminous coal containing iron pyrites, on the magnesia in the clay and in the limestone. The coating is washed off by the rain, and unless the bricks are especially charged with magnesia it will, in time, cease to appear. Bricks burned with wood or coke fuel are, so far as known, free from this defect. It is recommended, therefore, that only wood or coke be used in burning bricks intended for fronts. The lime also should be burned with wood, or else obtained from pure limestone, containing no magnesia. English Portland cement is said to be free from this substance.

In the system of electric illumination of trains, recently adopted on the Eastern Railway of France, there is a Gramme machine, driven by the locomotive and accumulators. M. Tommasi has introduced an "automatic interrupter," the action of which is to break all communication between the Gramme machine and the accumulators, when the speed of the train descends below the normal. Further, if the lamps are lit at such a time, or when stoppage occurs, the automatic apparatus substitutes the accumulators for the machine, or reciprocally; the moment of change is not perceptible. When the train is running without the lamps being lit, the Gramme machine charges the accumulators exclusively; when the train is lit, the machine feeds both the lamps and the accumulators. It is only when the illuminated train slackens speed by stops, that the accumulators supply the current required by the lamps, and this is restored when the train has resumed its normal speed. Thus the accumulators are not so cumbersome as if they had sufficient capacity to feed the lamps during the whole journey. There is a Swan lamp in each compartment. The train is lit by the guard on entering a tunnel. The cost for an ordinary train of thirty-six lamps is about twelve francs a day, whereas the lighting with oil cost thirty-six francs, and was very imperfect. — *English Mechanic and World of Science.*

Alumni Column.

[This department can be made complete only by continued contributions of items of general interest in connection with the lives and occupations of alumni, graduates, and former members of the Institute. We invite the co-operation of each alumnus, and ask for full and frequent contributions to the column.]

'75. Frank S. Dodge, who was with the Hawaiian Government Survey, from 1877 to 1881, is at present civil engineer for the Union Iron and Steel Company, Chicago, Ill.

'75. W. F. Sargent is practising civil engineering at Grand Forks, Dakota.

'78. J. W. Rollins, Jr., has the position of chief engineer on the Atlantic and Danville Railroad, at Waverly, Sussex County, Va.

'78. The following postscript appended to a letter from Linwood O. Towne, '78, gives a hint of the present life of some of our graduates: "If any of you men back at M. I. T. want food for reflection on the subject, 'Is life worth living?' let him shape his course so as to bring him to a snow-bound mining camp, thirty miles from railroad, over two of the Rocky's highest ranges; time, midwinter; society, three young ladies and forty young gentlemen, and generally a 'life in log-house' sort of existence to which other things correspond." L. O. T., '78.

'81. David S. Bissell has returned from his studies abroad, and will soon go into the iron business.

'81. F. H. Allen is about to resign his position at Santa Reta, New Mexico.

'81. Webster Norris recently delivered a lecture before the Cambrian Scientific Institute, at Johnstown, Pa.

'81. Ira Abbott has been elected vice-president of the Toronto Bridge Company.

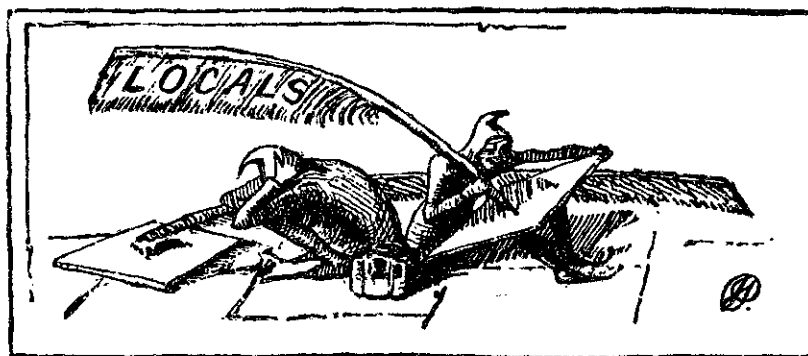
'81. H. H. Cutler and G. A. Mower have an office together at 82 Water Street, Boston. They are agents for the Dean steam pump and Crosby gauges and steam fittings.

'81. A. I. Tyler is at the Joliet Steel Works.

'82. S. Morton Munn leaves for Cincinnati in a few days, there to engage in the manufacture of artificial fertilizers.

'83 and '84. R. F. Herrick, formerly of '83, and W. P. Kennard, formerly of '84, are residing together in Lowell. Mr. Herrick is employed as chemist by the Merrimack Manufacturing Company. Mr. Kennard is employed by the United States Bunting Company. Their rooms are at 38 Linden Street.

'84. F. H. Newell has returned, after a year's absence, and has joined the class of '85 as a regular.



See *Columbia Spectator* of Dec. 14, 1882, in regard to our A. A.'s collar.

The tale of a coat. T-ck-rs.

Do you wear the Institute necktie?

When is the Freshmen dance to be, or are n't they to have any?

"Don't call me —; call me Finnegan," says a third-year civil.

There is a Freshman called " ? " Wherever he goes, it means questions.

We think B— had better "grind" on some old spelling-book for a few weeks.

The examination of the special class in Spanish will be held Jan. 8, at 3.30 P. M.

According to present indications, the Freshman ball will be given early next term.

No "free blows" at the new skating rink. Special rates practically not obtainable.

"Crushed again!" is what the opera hat said as it came in contact with a lamp-post one morning.

The V. L. Club are such fast eaters that they have to set the clocks ahead every day to keep up with them.

Tompkins says it is a great bother to mark his hat-hands so as to wear the one she gave him, when he calls on her.

Messrs. Tyler and McFarlane, last year's assistants in the chemical laboratories, paid the Institute a visit the other day.

Foreigners complain that Americans have no reverence for king and queens. No, not if we have the bowlers and jokers.

Eighty-four civil engineers, who have been greatly surprised in being told that they will have no more lettering after this term, are exerting themselves to the utmost to gain a proficiency in this, one of the greatest of all arts.

"Mr. Thompson" was making the rounds of the classes last week collecting money to give the postman a "Happy New Year."

"Whence come those sounds so loud and shrill" which disturb the classes in the mechanical and civil rooms every afternoon?

Several Freshmen have considerable skill in the tailor's art, — fashioning laboratory dusters into swallow-tails and sleeveless jackets, amputating overall straps, etc.

The last TECH suggested that the miners should show the *use of the drill* to the workmen on the new building. Would it not be sufficient to refer to the catalogue?

We should advise the Fresh who a short time since asked for some "carbonic acid" to go interview a soda-water bottle. He would derive or at least imbibe more satisfaction therefrom.

English Prof. — To what race do the Russian imperial family belong?

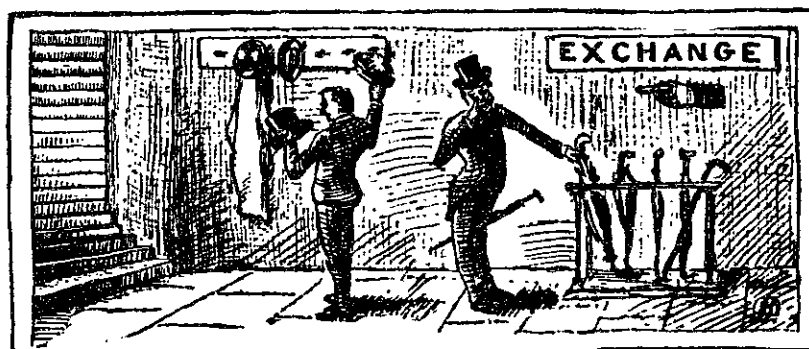
Student. — Don't know, sir; but I should think, at present, they belong to the race for life.

Knowing the solicitous care with which Mr. L. has assisted the gradual darkening of the frontal projection of his upper maxilla, the electrical engineers recently presented him with a mustache cup. Would n't a cat have been more economical.

The Freshmen seem to think that they are pushed in solid geometry to finish the subject in twelve lectures, but they console themselves with the idea that the other years are much easier. They better undeceive themselves as soon as possible.

The Fresh who, after submersing in water a piece of zinc, carefully wrapped in wire gauze, and then complained of its not giving off hydrogen, may be regarded about on a par with another, who recently brought a dish full of water to get some sodium in.

Noyes Bros., 4 Summer Street, have, after considerable trouble, obtained from Paris a supply of silk in the Institute colors, — cardinal and silver-gray, — and are making it up into neckties and handkerchiefs. Don't fail to call before the stock is gone.



WE make our way with difficulty through the layer of Christmas cards that cover the sanctum floor, and struggle toward the table where the familiar face of Lampy greets us from a deep blue background. Why he chose blue as the color of his Christmas chromo is a mystery; perhaps it reflects his state of mind, perhaps it is a delicate compliment to Yale. He is the first, we think, to appear with an inspiration from "Iolanthe," and since all things by season seasoned are, we quote its moral for the benefit of '86.

Now, all ye little Freshmen, dear, I beg of you take warning, —

Fie! fie! Snodkins was a rogue.

And never cut a lecturer to go skating in the morning.

Tol de riddle! tol de riddle! tol lol day!

And if you heed these precepts good and fly from all temptation,

And study hard and faithfully before examination,

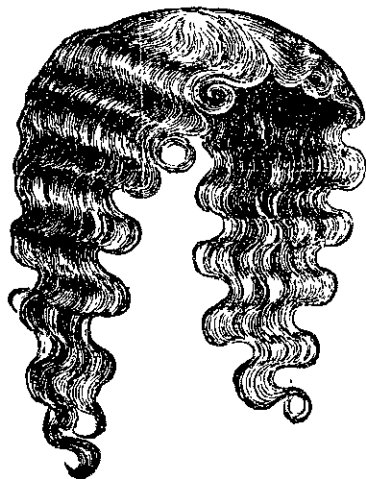
Perhaps one day you'll reach the Sophomore's exalted station.

Tol de riddle! tol de riddle! tol lol day!

The *Michigan Argonaut* has proved one of the most successful ventures of the year in college journalism. Though occasionally a trifle heavy, it wisely "prefers a dull article to a silly one when it comes to a choice between evils."

The *Amulet* is out, and is highly praised."

We have recently added to our exchanges the *American Engineer*, and students will find in it much valuable information. The issue of Dec. 22 contains, amongst other matter, a description of Blake's new Independent Condenser, the last of a series of articles on "The Commercial Value of Heating Furnaces of Different Types," illustrations of some new workshop tools, and a continuation of an interesting series of illustrated articles on "The Screw Propeller."



“WHAT ARE THE WILD WAVES SAYING?”

THE son of Ex-President Hayes has entered the Massachusetts Institute of Technology. He is to become a civil engineer. — *Dartmouth*.

We understand that Daniel Webster is studying at Dartmouth with a view to teaching school.

Professor: “The agnostic may be briefly described as the Knownothingist of philosophy. Passing that point, Miss — may tell what she knows of sense perception.” *Miss —*: “Professor, I am an agnostic.” — *Vassar Mis.*

This choice bit from the *Alma Mater*, — you can find the rest in the reading-room: —

Never once say that “You don’t care,”
Never exaggerate, never swear.

Geometry class room *Professor*: “You do not seem to have studied this very carefully.” *Freshie* (a little deaf), excitedly: “Yes, sir, that is just what I am trying to prove.” — *Ex.*

The University of California is to have a mechanical laboratory.

Boston University has a new building for the College of Liberal Arts.

Lehigh University has a new gymnasium. Dr. Sargent of Harvard arranged the furniture and apparatus.

Candy pulls are doing “much to promote good feeling among the students” of the Boston University, according to the *Beacon*.

Professor: “Phryxus and Helle were riding on the golden fleece, when Helle fell off.” *Student*: “Helle he did (!)?” — *Polytechnic*.

FORTUNE TELLING.

Her little hand lay soft in mine,
While, o’er its pink palm bending,
I traced with care each wavy line
In hope the secrets to divine
Hid in their graceful blending.

I spoke of fortune’s gifts in store;
Of prospects bright and pleasant;
Of wealth, ease, travels, sea and shore,
Discarded suitors, full a score,
Of him who sighed at present.

“His ardent wooing must succeed,”
Said I, “as plainly written”;
But she, quite pitiless, indeed,
Softly replied, “Pray, can you read
The meaning in this mitten?”

Athenæum.

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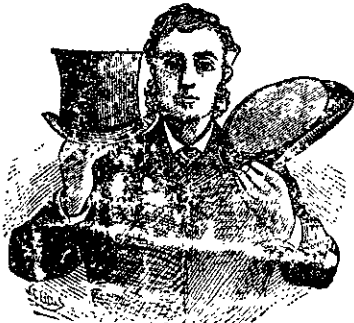
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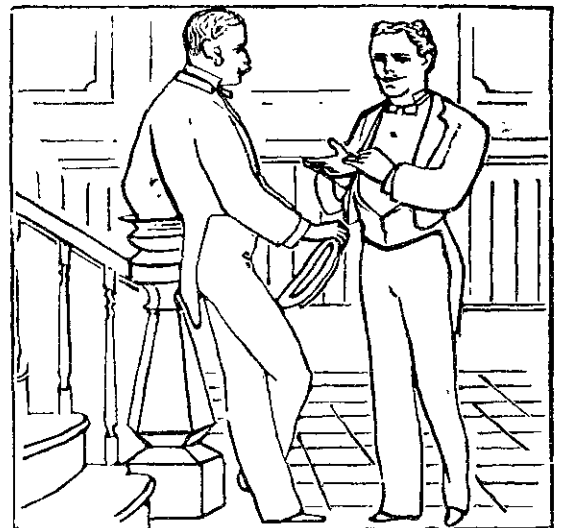
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The *Trinity Tablet* — ha! ha!
ha! has a page of — ha! ha! ha!
cuts, but don't look at them, —
ha! ha! ha! it's really too pain-
ful — ah!

A meeting of "Laboratory"
'81 was held last Monday even-
ing at the Vendome.



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instruction, but the students
seem inclined to shun their
designing in order to gratify
their taste for coloring.

Our architectural friends
should have heard Mr. Ed-
ward Atkinson's remarks on
"the combustible architect"
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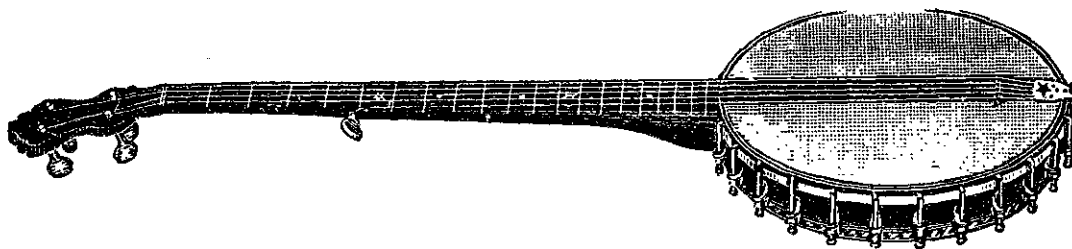
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 Striking the gall he hath.

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 Only a smile alarming:
 Handkerchief waved with grace.

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 Only a Freshman scooter, —
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Athenæum.

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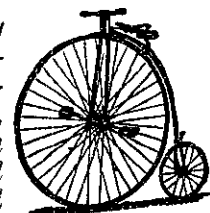
T. JAY FISHER.

E. W. Kingsbury and A. S. Jenney, special architects, '83, took the first and second prizes, respectively, at the fancy party held at the Olympian Rink, Christmas night. The first prize was a handsome pair of nickel-plated extension skates, and the second was a season ticket to the rink. Mr. Jenney also took the second prize at the fancy party held during the Thanksgiving holidays.

'86 to Society Man: "Where do you meet? I believe I'll attend some evening, and if I like your society I guess I'll join." — *Ex.*

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A co-ed tug of war is hinted at. — *Beacon.*

A crying evil — The babies in our block. — *Lampoon.*

C- n, '82. Take him for half-and-half, we shall not look upon his like again. — *Ex.*

Steps are to be taken toward forming an inter-collegiate boating association. — *Athenæum.*

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