Strictly High Grade
Photographs and Portraits.

(Successors to Hastings)

146 Tremont Street,
Boston.

Oak Grove Creamery Company,
Dairy Lunch Room.
445 Boylston Street, cor. Berkeley, opp. Y. M. C. A. Building,
Where can be had Sandwiches of all kinds, Soups, Tea, Coffee, and regular Dairy Lunch.
Everything First Class.

Pure, Fresh-churned Butter, in Quarter-pound Prints, 5 and 10 Pound Boxes. Pure, Fresh
Milk and Cream, delivered in Glass Jars. Fresh-laid Eggs. Pure, Full Cream Cheese,
American (plain), Sage, Neufchatel and Edam. All kinds of Fruit Ices.

Nelson L. Martin.

We offer till January 1, 1897,
The Apex Fountain Pen
Fully Guaranteed, for $1.00.
No Further Discount.

A. D. Maclachlan,
214 Clarendon Street, Boston.

Gymnasium.
Physical Culture. Keep in Condition by using our Gymnasium.

Boston Young Men's Christian Association,
(Boylston and Berkeley Streets.

Terms, $10 per Year,
Including all Other Privileges of the Association.

Medical Supervision.
Fine Apparatus. Convenient Lockers. Frequent Classes.
New Shower, Sponge, Spray, and Steam Baths.
Free Instruction.
Open, 9 A. M. to 10 P. M.
Massage Department—Services Reasonable.

R. J. Roberts, Director. Geo. L. Meylan, M.D., Medical Director.
OUR ANNUAL CLEARANCE SALE COMMENCES MONDAY, DEC. 28TH, CONTINUING THROUGH JANUARY.

Our entire Stock of Clothing, Furnishing Goods and Hats will be offered at greatly reduced prices to close.

Orders taken in our Custom Tailoring Department at reduced rates.

202 to 212 BOYLSTON STREET AND PARK SQUARE, BOSTON.

THE HAT OF THE SEASON. SPECIAL ATTENTION
Given to Technology Uniforms.

STYLE  PRICE,
1616  $2.00,

Special 1616 has all the characteristics of a $3.00 hat and costs but $2.00.

CONTINENTAL CLOTHING HOUSE,
COR. WASHINGTON AND BOYLSTON STREETS.

HALL TO LET

For Evening Parties; Ladies', Gentlemen’s, or Mixed Clubs; Receptions, Small Banquets, Morning Talks, Classes, Whist Clubs, etc., etc. Desirable location on Newbury Street, one-half block from cars. No noise; no stairs. Butler’s pantry, dumb-waiter, range, dressing room, service of janitor, etc. Terms reasonable.

Apply to 83 Newbury, or to 229 Berkeley Street, Boston, Mass.

J. C. LITTLEFIELD,
Tailor · and · Outfitter,
21, 23 BEACON STREET, BOSTON.

I can offer you a larger and more complete assortment than can be seen elsewhere, and at lower prices for the same qualities. Look in and examine my prices before placing your order.

GOLF BREECHES, RIDING BREECHES, AND DRESS SUITS A SPECIALTY.

DISCOUNT TO STUDENTS.
THE LARGEST ASSORTMENT OF FOREIGN WOOLLENS SHOWN IN BOSTON

M. L. T. CO-OPERATIVE.
THE TECH

Vol. XVI. Boston, December 24, 1896. No. 12

Published every Thursday, during the college year, by students of the Massachusetts Institute of Technology.

Charles Edward Amory Winslow, '98, Editor-in-Chief.
Clarence Renshaw, '99, Assistant Editor in Chief.
Thomas Eddy Tallmadge, '98, Secretary.
Harry Draper Hunt, '97.
Morris Kinnard Trumbull, '97.
Ward Wellington Ward, '98.
Harold Wellington Jones, '98.
George Reed Wadsworth, '98.
John Magee, 2d, '99.

W. R. Strickland, '98, Business Manager.

Subscription, $2.50 per year, in advance. Single copies, 10 cts. each.

For the benefit of students THE TECH will be pleased to answer all questions and obtain all possible information pertaining to any department of the College.
Contributions are requested from all undergraduates, alumni, and officers of instruction. No anonymous manuscript can be accepted.

Frank Wood, Printer, 352 Washington Street, Boston.
Entered in Post Office, Boston, Mass., as Second Class Matter.

Now is ye Days of all ye Yeare,
Ye time which gladnesse brings:
Of gaudie stockings heaped full highe
With store of goodlie things.

And some, mayhap, will be full smalle,
And some' full bigge, I recke;
But heed ye well, ye beste of alle,
Is still ye Mas Tchee.

Another of the brief respites of the college year has come—the one fraught with the most tender associations and memories of any day in the whole year. At this season, as the snow whirls without, we gather about the fire and forget the stress of struggle and effort as we forget the actual storm outside. Only to those who are so fortunate as to be at home on Christmas Day, does the blessing of the time come with its fullest force. Every Institute man should remember, however, that if he cannot go to his own home, there is an open door at the Technology Club, and a friend's hand to make him welcome.

The TECH has good hopes, then, that all of us who are bound together by the love of old Technology may pass the festival in the happiest of manners; and that this may be the case, it extends to all its heartiest good wishes.

The most interesting feature of President Walker's report, of which an abstract is printed in another column, is the account of the projected new building. We all of us realize how badly this extension is needed; and the detailed account of the scheme is almost tantalizing. There is good hope, however, that the sum of money needed may be forthcoming in the near future, and it may be that most of us now in college will yet see the plan carried into execution. The Institute seems to have passed its period of very rapid growth; and if the new building can be accomplished, it means ease and comfort for a good many years.

The condition of the alleyway used by so many of the students to reach the Engineering Building, has been a source of great complaint this season, and the editors of THE TECH took the liberty of bringing this feeling on the part of the undergraduates to the attention of the authorities. They are happy to announce that a board-walk continuation of the Ludlow brick sidewalk and some stepping-stones for crossing the alleyway have already been ordered. A more permanent settlement of the difficulty is planned in connection with the new building. The matter has been carefully considered, and the practical difficulties in the way of any such permanent arrangement are great. We feel sure however, that the improvements mentioned above will be very gratefully received.
THE action of the Class of '93 in sending out notices to members of the class requires more than passing notice in the alumni column. This class has taken the initiative in a step which, if followed by other classes, would secure much real benefit to the Institute. For among the questions calling for answers on the "Circulars of Information," as they are called, are the following:

1. Looking over the four years at the Institute, is there anything you think could be changed for the better, including customs?

2. What ideas would you suggest for the advancement of the Institute in public favor?

The candid opinion of some of our young alumni upon such questions as these, with suggestions upon relative points as they present themselves, could not fail to bring forward new and valuable ideas. Moreover, it is the further scheme of the committee, if other classes will take the matter up, to establish a card catalogue at the Technology Club, in which the address, business, etc., of every alumnus shall be on file. By this means the alumni would be brought into closer relationship with each other, and much valuable interchange of ideas would result, by which Technology could not fail to be the gainer. It is a worthy scheme, which should be carried out with a will, and much credit is due to '93 for suggesting it.

The fact that recent meetings have been held at both Harvard and Yale for the purpose of instituting the necessary steps to a readjustment of the old ties, is welcome to all lovers of college sport. We have been waiting for definite action in this direction for some time, since it is our opinion that both universities have been undoubted losers in the cessation of the generous rivalry which had existed up to the last few years. It is just as certain that a number of Eastern colleges have gained what these two have lost, and in doing so have vastly strengthened college athletics of to-day; but tradition and the prejudice of the thousands of enthusiasts call for the old régime to be rejuvenated. The undergraduates and the alumni of both schools are keen for the fray, and what the ultimate action of the committees shall be is awaited with anxious interest.

The fact that so much national interest centers in the coming together of Cambridge and Oxford is not a mere matter of sentiment in England to-day, but is the culminating fire of enthusiasm that has been added to year by year, from generation to generation, since the first meeting of these noble contestants.

Therefore we plead that the committees from Harvard and Yale cease their undignified quibbling, and come forward in a manly way, acknowledging the mistake which has caused so much regret, and in coming to a definite understanding grant to both sides their truly mutual wish.

The management and participants in the L'Avenir entertainment are to be congratulated on the success that has attended their labors. The efforts made by the society for two years to free itself from the burden of debt, imposed through a combination of unfortunate circumstances, cannot be too highly commended. A most pleasant feature of the entertainment, and of similar entertainments in the past, was the whole-hearted way in which Tech. men gave their service, and worked for success regardless of any personal affiliation with the society. This interchange of courtesies on the part of the various societies at the Institute is noteworthy.

The support of the students at large, however, was not what it might have been, and we fear that the debt will not be completely wiped out.

The editors of the '98 "Technique" are reaching a point in their labors when the assistance of the college at large becomes absolutely imperative. One of the most important departments of the book is that of grinds, and this department cannot possibly be made a success without generous aid from
men in all classes and all courses of the Institute. The response received thus far has been, we are informed, very meager. We urge every '98 man, as he cares for his Class Book, every man in the Institute, as he takes pride in his College Annual, to find an hour or two in the Christmas vacation for writing down "gags" heard in the classroom; bits of verse, quotations, or anything which may help to make the volume more of a success.

L'Avenir Theatricals.

A good-sized audience listened with appreciation to the entertainment given in Huntington Hall, December 19th, by L'Avenir. All of the seats of the hall were not available, owing to the stage arrangement, but most of the seats on sale were filled. The performance as a whole reflected great credit on the Society.

The entertainment consisted of a play and a vaudeville performance. The play, "Les Amours d'un Technologien," was written by Godfrey L. Smith, '98. The scene is laid in the London parlor of M. and Mme. Delaroux, who, with their daughter Elise, are living in England for a time. Fred Larkin, M. Delaroux's nephew, is in love with Mlle. Elise, but the young lady has bestowed her affections on Harry Richardson, son of their London neighbor, Mr. A. Percy Cholmondley, and a graduate of M. I. T. Mr. Richardson, although unacquainted with the Delaroux's, gains access to the presence of Mlle. Elise by bribing Mary Ann, the Irish servant, and upon pressing his suit is accepted. Before he can retire his rival appears, and the accepted suitor is obliged to hide. The warmth of Mr. Larkin's love-making draws Richardson from his hiding place just as Delaroux enters. Things look unpleasant, when Cholmondley, who has previously called on Mme. Delaroux, returns for the cane which he left behind, and, with the aid of Madame, all is straightened out. An undercurrent of humor is found in the trials of Mary Ann, who speaks French with a most astonishing accent, and revenges the wrongs of her race upon a plaster cast of Napoleon.

Southworth, 1900, as Mme. Delaroux, and C. E. Lord, '98, as Cholmondley, did perhaps the finest work. Smith played Mary Ann with great humor, and Chapin, '98, as Terence Mulwaney, her lover, looked duly meek and resigned. Lynch, '99, was an ardent Harry Richardson, and Leeds, 1900, and McCruder, 1900, as M. Delaroux and Fred Larkin respectively, were satisfactory.

In the vaudeville Messrs. Davison and Rogers did a clever variety act, entitled, "Weary Willie and Dusty Denny," introducing dancing, singing, and local hits. Lynch gave a Spanish dance, whose only fault was its shortness. Mason and Smith made a decided hit in a character sketch enlivened by grinds upon faculty and students, and by tuneful (?) melody. The programme closed with Coquelin's monologue, "Le Chirurgien du Roi s'Amuse," spoken by C.-E. A. Winslow, '98.

In response to enthusiastic calls from the audience Mr. Smith and M. Bernard appeared before the footlights and made brief speeches.

After the performance the actors, ushers, and members of the society, with their friends, crossed the street to enjoy a little supper tendered them by the Technology Club.

The Cane-rush Dispute.

It is probable that the dispute as to the meaning of the tied cane rush will soon be amicably settled. Last Wednesday the committees from the two classes met and agreed to recommend to their respective classes that the matter be left in the hands of a board of arbitration composed of two upper class men elected by each class and a fifth member, student, alumnus, or member of the faculty, chosen by these four. Messrs. Hurd, '96, and Allen, '97, were chosen by '99, and Messrs. Winslow, '98, and Wadsworth, '98, by 1900.
The President's Report.

President Walker's annual report to the Corporation of the Institute was presented at the last meeting of the Corporation, and will soon be ready for publication. The following abstract was obtained by The Tech, through the kindness of President Walker and Dr. Tyler.

The year has been, in general, one of prosperity. While the needs of the school have, perhaps, been felt more than ever before, this has been largely due to the development of courses, the increase of machinery and apparatus, and the ever-increasing specialization of the work of the higher years. It has not been loss, but gain which has caused the degree of inconvenience and discomfort which has been experienced. This is the kind of hardship which it is easiest to put up with.

In the spring of the present year it was hoped that, even with the limited means at the disposal of the Corporation, a new building might be erected which would afford relief to several overburdened departments, and provide for the growth of the school for some years to come. Plans for a building one hundred and fifty feet in length by fifty-eight in width, extending from the present Architectural Building toward the Boston and Providence Railroad, were prepared by Professors Chandler and Homer, with the assistance of other instructors in Architecture, in a manner which would allow the work to be immediately proceeded with. Unfortunately the Executive Committee received legal advice that it was doubtful if a certain amount of money, which was to come to the Institute by bequest, would be available for such a use. An attempt was then made to secure the funds by subscription; but the general condition of business was such as to give no encouragement. It was, therefore, found impossible to carry the plan into execution for the present year.

The new building, when erected, will benefit especially the departments of Chemistry, Architecture, Biology, Mechanical Engineering, and Naval Architecture. In the basement, in addition to heating and ventilating apparatus, there was to be a large and well-equipped lecture room for General Chemistry.—large enough to allow the whole class to be assembled at once. The first floor was to contain the department of Biology.

The plans for the Biological Laboratory, as worked out by Professor Sedgwick and Professor Chandler, were exceedingly ingenious and effective. Portions of the second and third floors nearest the Architectural Building were to be connected with its present rooms, and devoted to the enlargement of the accommodations of the Architectural department. This would result in bringing the Drawing rooms upon two floors, instead of leaving them distributed over the whole building as at present; and no Drawing room would be separated from the Library by more than one flight of stairs. The third floor of the present Architectural Building would be devoted entirely to the Library. This latter arrangement would not only provide for future increase of books and photographs in this already magnificent library, but would permit a freedom in their use which is at present impossible. In addition to the provision thus made for ample Drawing rooms and for a largely increased use of the Library, a feature of great importance was to be added. This was a room of the whole depth of the building, and forty feet in length, to be assigned for the museum of Architectural appliances, models, and designs. In order to get the proper effect in placing plaster casts of columns, friezes, and full size ornaments, this room was to rise through the next floor to the roof, the floor of the fourth story being left out through the whole width for a length of twenty-eight feet. In this way it would be possible to give the proper effect to the superb casts now coming into the possession of the Institute through the expenditure of the Arthur Rotch Fund. The rest of the fourth story of the new building was to be devoted to the laboratory of General Chemistry.

It would not be possible to give an adequate idea of the advantages which would result to the school from this source, without speaking of the uses it was proposed to make of the space that would have been vacated in the existing buildings. The Architectural Department being concentrated upon two floors, the present basement and the fourth floor of the Architectural Building would be vacated. In the basement it was proposed to afford opportunities for the expansion of Professor Lanza's superb laboratory of Applied Mechanics, while the fourth floor would be reserved for the Department of Naval Architecture, or possibly for part of the Civil Engineering Department also.

In the Walker Building the large laboratory on the Newbury Street side of the upper story, now used for General Chemistry, would afford much desired space for the expansion of the Physical and Chemical departments.

In the Rogers Building the removal of the Biological department would leave vacant a room in the rear of the first floor, ninety feet across and thirty in
depth, of which it was proposed to make a general reading room for students, warmed and lighted during the evening for study or quiet conversation,—an addition of inexpressible value. To hundreds of students the opportunity for passing their evenings in a large, well-lighted, well-furnished, and well-ventilated room would not only, it is believed, facilitate their progress as scholars, but would afford a very valuable means of bringing them into better social relations than they now enjoy at the Institute.

Such was the pleasant dream with which the Executive Committee and the Faculty of the school indulged themselves until rudely awakened by the impossibility of securing the necessary funds, under the painful industrial and commercial conditions prevailing the past season. Is it too much to hope that those who have again and again come forward to the support of the Institute in time of need and trial, will not long allow the school to suffer from accommodations so painfully cramped? It may be mentioned that the Executive Committee received propositions from responsible builders which have brought the entire cost of the building within $100,000.

The school year of 1895 to 1896 closed on the 9th of June, according to the new calendar. The graduating exercises will hereafter come always in June, the introduction of several holidays having the effect to bring Commencement between the third and the eleventh of that month. The Class of 1896 was by far the largest in the history of the school, numbering 188.

The registration of this year, as by the catalogue now in press, amounts to 1,198, against 1,187 twelve months ago. The statistics for the entrance examinations this fall show that 263 students have been admitted by examination, and 39 have been rejected. Of those admitted, 183 entered free of condition, 43 have one condition, 23 have two conditions, and 14 have three or more conditions.

The aggregate number of students is divided among the classes as follows: Graduate students, candidates for advanced degrees, 11; regular students, fourth year, 194; third year, 196; second year, 183; first year, 286; special students, 328. Assigning the special students to classes according to their predominant studies we get: Graduate students, 11; fourth year, 258; third year, 290; second year, 307; first year, 332.

Massachusetts sends about 61 per cent of all the students, or 729. New York is next, with 69 students; Illinois is third, with 45; and Pennsylvania fourth, with 42. The students coming from other States are distributed as follows: Maine, 27; New Hampshire, 26; Vermont, 7; Rhode Island, 20; Connecticut, 24; New Jersey, 13; Delaware, 5; Maryland, 9; Ohio, 28; Indiana, 3; Michigan, 6; Wisconsin, 6; California, 9; Missouri, 9; Alabama, 1; Arkansas, 1; District of Columbia, 18; Georgia, 3; Idaho, 1; Iowa, 14; Kansas, 3; Kentucky, 12; Minnesota, 7; Montana, 3; Nebraska, 2; North Carolina, 1; Oregon, 4; South Carolina, 6; Tennessee, 1; Texas, 2; Utah, 2; Virginia, 3; Washington, 5; West Virginia, 2; Wyoming, 1.

There are 20 foreign students at the school. Mexico has the largest representation for any foreign country, 3 students; Cuba, England, New Brunswick, Ontario and Ireland each send 2; while France, Turkey, Venezuela, Chili, Nova Scotia, and Quebec have 1 student each.

The following is a list of the Massachusetts towns which send ten or more students to the Institute: Boston, 227; Newton, 44; Cambridge, 30; Brookline, 21; Newburyport, 20; Somerville, 19; Malden, 16; Hyde Park, 14; New Bedford, 12; Lowell, 11; Brockton, 10; Lynn, 10; Salem, 10.

There are 80 graduate students; 11 of these are our own graduates, 14 are from Harvard, 5 from Amherst, 3 each from Brown, Georgetown, Smith, Wellesley, and Yale; 2 each from Iowa State College, Johns Hopkins, and Princeton; 1 each from twenty-eight other institutions.

COMMUNICATIONS.

The Editors do not hold themselves responsible for opinions expressed by correspondents.

TO THE EDITORS OF THE TECH:—

Organizations of various kinds are numberless as the sands of the sea at Technology, but among them all the debating club finds no place. It would seem as though such a club should be peculiarly welcome here, where no attention is given to elocution, for to acquire facility in speaking demands practice which can best be had through the debating club. If a few active men would start such a club it would soon become popular, as the practical advantages to be derived from it are too obvious not to appeal to everyone.

E. N., 1900.
Captain Bigelow has decided that there will be no drill to-day (Wednesday, the twenty-third).

Third-year section, in field geology, have been doing work at Arlington Heights during the past week.

Dr. Ripley has been elected Secretary of the Technology Club, to fill the place of Professor Allen, resigned.

The Seniors have finished their work in the Engineering laboratory, and in its place are now taking gas analysis.

The Junior Class pictures may be obtained at once from H. I. Lord, Box 35, Cage. Cash must accompany order.

At the last meeting of the Biological Club, Dr. Wysse spoke upon "Inversion of the Germ Layers in Mammalian Embryos."

Dr. Ripley had an article on "Some Data for the Construction of a Map of Cephalic Index," in the last number of "L'Anthropologie."

The regular work of the laboratory of Applied Mechanics has been finished, and the machines are now free for use in thesis work.

Prof. F. S. Woods has changed his consultation hours to Wednesday, 12 to 1, and Friday, 10 to 12, at Room 10, Architectural.

By request of the late Mr. Allyne, a quartette from the Glee Club, consisting of Coombs, Tucker, Dodge, and Anthony, sang at his funeral.

On account of the unsatisfactory result of the first Class picture of '98, a second one was taken on Thursday, December 17th. Mr. Hearn was the photographer.

Dr. G-ll, assigning the lesson: "The class will take as far as 'Damit,' page 10." Violent stamping throughout the room announces similarity of sentiment in the class.

At a meeting of the Institute Committee, Friday, December 18th, Mr. E. H. Hammond, '99, was elected to the office of secretary of the Committee, in place of Mr. Willis, resigned.

The designs submitted by the Juniors, Course IV., were judged by a committee of Boston architects at the beginning of this week; their decisions will be published in the next issue of this paper.

The Sophomore Class was addressed upon the Negro question last Friday, by Booker T. Washington, president of the Tuskegee Negro Institute. Mr. Washington spoke well, and his talk was much enjoyed by all who heard him.

On Saturday afternoon the editors of The Tech spent a half hour at Purdy's, where the picture of the Board was taken. The Board passed the remainder of the afternoon at the "Old Elm," where jest and jollity reigned supreme.

The M. I. T. Glee and Banjo Club were at Salem last Wednesday. The audience was small, owing to the storm, but the Club received an enthusiastic reception all the same. The Club also played at the Colonial Club last Saturday night.

Mr. R. S. Willis, of the Class of '98, left on Wednesday night for Arizona, where he is to spend the winter on a fruit farm. Mr. Willis was obliged, on account of his health, to escape a New England winter, and thus give up, for a time at least, his work at the Institute.

A meeting of the Yacht Club was held December 15th. It was decided to hold a smoker at the Quincy House, on Monday.
The following men were elected to membership: Packard, '98; Bleecker, '98; Winslow, '98; Putnam, '98; Sheak, '99; Jones, 1900; Barney, 1900.

The Glee, Banjo, and Mandolin Clubs spent the early part of Saturday afternoon at Chickering's, where the annual pictures of the several clubs were taken. In addition to the pictures of each club, one of all the clubs was taken, to be used by Manager Lamb for advertising purposes.

The large rotary pump which was ordered from the Holyoke Machine Co., and which was expected to arrive a month or more ago, will probably be received shortly. The delay was caused by the fact that the Company is making a special pump for the Institute, instead of sending one from stock.

At the last meeting of the Geological Club, Miss Dolbeare read a paper on "A Typical Glacial Delta at Cow Island." Mr. Philippe Grabau also spoke upon "The Past Pleistocene History of Eighteen Mile Creek in Western New York." A large and enthusiastic audience was present to hear Mr. Grabau.

The Y. M. C. A. meeting Saturday morning, December 19th, was devoted to a consideration of "The Needs of Foreign Missions." C. M. Lewis, '99, who has joined the Volunteer Band, by some carefully selected figures showed the tremendous disparity between the home and the foreign field.

A meeting of the Chicago Club was held December 16th. The only business transacted was the election of officers, which resulted as follows: De Golyer, '98, President; Zimmerman, '98, Vice President; Baumann, '97, Secretary; Gillson, '99, Treasurer; Angus, '99, and Tallmadge, '98, on Executive Committee.

The work in boiler testing for this term will consist of tests on the battery of boilers at the Engineering Building, and on the Babcock and Wilcox boiler in the basement of Rogers, which was sometime ago fitted with a Hawley down-draft furnace. None of these boilers have been tested since the use of soft coal was adopted.

The next number of the Technology Quarterly will contain the results of the work of the Engineering laboratories for last year in steam and hydraulics, and the following number will contain the results of the tests of timber headers and trusses. The latter have aroused considerable interest among engineers, and the article will probably include a number of half-tone illustrations.

The Junior division in Industrial Chemistry made a trip to South Wilmington a week ago Wednesday to visit the Merrimack Chemical Works. The party was in charge of Instructor Thorp, of the Chemical department, and particularly inspected the manufacture of sulphuric, nitric, and hydrochloric acids, and sodium sulphate. Every kindness was shown to the visitors, they being conducted about the premises by Mr. H. Howard, Assistant Superintendent of the works, and a former student of Tech.

On Thursday evening, December 17th, Mr. Boos read a paper before the Boston Society for the advancement of Physical Education. His subject was "Gymnastics, Sports, and Games in Germany of To-day." The great degree to which German institutions surpass those of America in the matter of gymnastics, and the great success of the policy of German educators in forcing school children and students to undergo physical as well as mental training, enlightens us as to what we must some day come to. The healthful influence of swimming baths was dwelt upon, and it was stated that in the common schools of Frankfort are to be found better accommodations in this particular than can be found anywhere in Boston. A strong point was made in that we, who take so little bodily exercise, are simply using up the energy capital
which our grandfathers developed, and that the hardihood of our race will soon deteriorate if we do not ourselves maintain the standard of strength which they have set.

The Civil Engineering Society held its last meeting on Monday evening, December 14th. Sixty-five men were present, many of whom were under class men. This was a splendid showing, and augurs well for the future of this society. The speaker of the evening was Prof. A. E. Burton, who related the experiences of the Technology party in connection with their trip to Greenland last summer. A number of new slides were shown, and, indeed, Professor Burton seemed more in his element than on former occasions, and in his informal talk to the students was able to give them more in detail the nature and bearing of his investigations. The experiments for obtaining the value of $g$ at different points while approaching the North Pole are certainly worthy of note, besides being of eminent value to science. Many of Professor Burton's shrewd observations on the character of the Greenlanders are instructive as well as entertaining. The natives among whom the party was thrown are extremely simple in habits and in thoughts, having had heretofore scarcely a sight of foreigners. The Danish authorities were cordial, and extended many courtesies to our "embassy," as it might be called. Professor Burton calls our attention to the fact that the Eskimos of Greenland resemble the Japanese very much in appearance, while those on the main continent and east of Hudson's Bay resemble the North American Indian.

What Todd Told at Kappa Tau Hall.

As the members of Kappa Tau finished their evening meal at their clubhouse, they strolled in knots of two or three out of the dining room, across the hall, and gathered around the blazing fire. This was only the fulfillment of an ancient custom, for blazing hearth logs had always been essential to supreme happiness of the members of Kappa Tau, and aside from their added charm on this frosty night, were ever the chief accessory of successful story-telling behind the sacred doors of the chapter house.

"Well, boys," said the Regent, between two long wholesome pulls at his "bulldog," as they settled down before the fire, "it seems to me that we ought to be a little more ceremonious than usual to-night, as long as it's Christmas Eve; and I move you that we call upon one of our number who has never before been asked to 'spread himself' formally,—our new brother in the bonds, Wallie Todd."

A unanimous "aye" decided this motion, and a self-appointed committee of two promptly pushed the victim into the inner circle, where the firelight only increased the flush which had risen to his face.

"I'm afraid you are rather jeopardizing the enjoyment of this auspicious night in relying on one not 'tried in the fire,'" he began; but he was instantly interrupted by a voice in the outer circle, "Oh, you're all right, Wallie; you belong to the Yacht Club!" Then he spun his yarn, in substance, as follows:

"You know I was with Ned Vane that year on the Harlequin. Morton, Bainbridge, Hale, and Stowe formed the rest of the crew. We ran her ourselves, you know, and we had a hot time from beginning to end,—loads more than the year before, when 'business was better,' and Ned had a skipper.

"We had been 'reaching' about all day in a light wind, coming round from Hyannis, and were a couple of miles east of West Island, when we ran into one of those celebrated sound fogs, and had a dirty time get.
ting into Newport; did the regulation thing in just scraping over the mud spit on the end of Rose Island while going in.

"Well, I forgot to say 'twas the night before the Fourth,' and we found Thames Street decorated up 'to beat the band' for some parade or other, and the crackers had evidently been placed on sale early. We had 'grub' on shore, and stayed there till about nine o'clock, and then came to the conclusion that we could see the show better from the water, after all, so we went on board.

"The fog was clearing now. Once more aboard, we thought we'd wake things up a little. It's funny what a gang on a little yacht can do when they get started; why, from absolute quiet, broken only by the thrumming of a banjo or so, we got them yelling back and forth from one craft to another, blowing bugles and firing cannon, until at last even the Sultana turned on the incandescents on her foreyard, and the Conqueror lighted her string from stem to stern, and both blew their whistles and sirens for a quarter of an hour.

"It died down after a while, though, and we took to the dingey and proceeded to 'do the harbor!' It was worth the trouble, for everybody was on deck, and we got lots of applause for our mandolin, banjo, and guitar trios, with which we serenaded cats and forty footers alike.

"But the fun of it all was yet to come. We rounded an old black fisherman, and lo! close by was a schooner yacht, bright from stem to stern, and under a canopy amidships they were having a dance. We pulled a bit nearer, and simultaneously there broke forth from the gang: 'Oh, I don't know;' 'Pretty fair;' for, fellows, there was a bevy of as pretty girls as you ever saw, all dancing together, and not a sight of a man about except the old skipper and his crew, sitting on the catheads for'ad, pulling their pipes.

"'Gad, but I wish we could get into the dance!' ejaculated Bainbridge.

"'Get up nearer!' urged Stowe.

"'Get into it? Get into it? We've got to!' said Vane, 'and we will! It's a crying shame for fruit like this to spoil,' he added, gallantly, and by this time we were alongside. We stretched our necks to get a better view, and Ned, apparently unable to control himself, dropped the forward oars and jumped up on the thwart to get his head above the railing. But the old dingey was too cranky to stand it, and we, taken unawares, couldn't right her, and in came a couple of barrelfuls of water, and over went Vane, working suit and all, into the drink. Up rose a yell, and in the confusion we could see a score of horror-stricken feminine heads over the railing, and hear the volley of sympathetic cries and shouts of encouragement as Vane rose to the surface. Somehow he couldn't seem to get to the boat, and in a second Bainbridge went in after him; and just as the skipper came to the side with a lantern we could see that Phil had reached him, and was supporting him.

"'He can't swim!' called Phil, between gasps. 'Get a rope!'

"'A rope!' we yelled, and in a moment the skipper passed a line over the quarter; Phil had made it fast, and the crew drew him on deck.

"As we climbed aboard we found Vane pretty far gone, and with the help of the girls got some brandy and towels and rubbed the boy until he came to; the girls meanwhile asking all manner of questions as to how it happened.

"As soon as Vane recovered a little he motioned toward the group of young women, and though he did not speak he seemed to wish to communicate with the matron, who stood among her charges.

"She came forward with anxious solicitude, and knelt beside him.

"'Poor fellow!' sighed one of the girls, 'I suppose he thinks he's going to die, and wants her to send some word to his mother.'

"We watched the two, Vane and his attendant, as they whispered together, and were
soon reassured, as a smile came over the face of the latter and she said,—

"He feels better now, but I think he'd better rest here a while."

"A moment later Vane found his voice, and said,—

"Awfully sorry I interrupted your dance, but pray go on now; it will make me feel better if you do."

"So they began waltzing again, and we stood around Vane and the matron and looked on; but somehow they weren't half so spirited as before, and as the measure ended they gathered around us once more.

"I shouldn't think it would be much fun without men," said Vane, with a good deal of assurance, I thought, for a sick fellow. 'Now, if you'd only let us help you out—'

"But you're too weak," interfered the matron.

"Well, the other fellows ain't,' suggested Vane, further; and we exchanged ecstatic glances at this exhibition of nerve.

"Well,—" said the matron, doubtfully glancing at the group of timidly expectant girls, 'I suppose I shall have to."

"Hullo!" he cried, an instant later, as a feminine yell came over from the schooner. 'Do you know that yell?'

"No. What?" said Stowe.

"Vassar!"

Electrical Engineering Society.

Last Thursday and Friday afternoons a number of members of the Electrical Engineering Society visited the power station of the Boston Electric Light Co., near Atlantic Avenue, the Seniors going on the former day, and the Sophomores and Juniors on the latter. Every courtesy was shown to the men by the officers in charge of the station, the principal objects of interest being explained and questions invited on all points not understood.

Aside from the fact that it is a typical central station, supplying arc and incandescent lights and power, the place was of great interest as affording the members an opportunity of seeing machines of a number of different types and sizes.

While the Friday afternoon party was in the station, a belt driving the exciter of one of the alternators broke, and the bearings of the machine on which its load was temporarily thrown became overheated. The accident, slight as it was, gave the men a chance to see the coolness, and quickness of thought and action required in cases of emergency.
At the B. A. A. games, held last Thursday night, E. F. Russ, '98, won third place in the three standing broad jumps. A. W. Grosvenor equaled the record in the 15-yard dash, but could not win a place, as he was heavily handicapped.

Ninety-eight won last year's class championship with 85 points; '97 was 2d with 54 points, and '96 3d, with 27. In the individual championship, A. W. Grosvenor, '98, was 1st, with 23 points; C. B. Stebbins, '97, 2d, with 20 points; and W. L. Butcher, '98, 3d, with 19 points.

Instructor Boos has started the game of Basket Ball at the gymnasium. This is certainly one of the best of indoor games, as during the winter months it is most excellent to develop the endurance and quickness of those who participate. It would be well for all those who wish to try for the next year's football team to enter this game. Baskets and the suitable style of ball will soon be provided. Harvard has a Basket Ball team. A game may be arranged with them later.

Although the fact that preliminary practice meets are held every week has been announced in The Tech, yet their character and object may not be generally known. The meetings are similar to those held two years ago, and are handicap, which should give every one a fair chance. They have proved a great aid to training as well as serving to bring out new talent. The present apathy and lack of interest in the practice games may be due to ignorance of their existence, but it is hoped that every one who can enter them will do so as often as possible.
There seems reason to hope, as the Lounger composes himself to pen his weekly (compositor will please not get it "weakly") effusion, that we may be blessed with a good old time Christmas, such as the more senile of us begin to talk about reminiscently. It is cold and clear; the moon shines brightly without, and the logs sparkle and flicker within. The work of the term is almost over; the Freshman feels himself half a Sophomore, and the Senior is wondering how many positions will be offered him at graduation; even the most pessimistic "boner" keeps the grim spectres of the Semies at a proper distance for this one week. The tenderest and the most convivial memories crowd upon one at this season, and the time is ripe for musings. On Wednesday, after waiting to buy a copy of the Christmas TECH, the members of the little Technology world will scatter to their homes. The Lounger likes to picture to himself the array of socks, large and small, darned and new, black and brown, which represents the aggregate hopefulness or conscious desert of all his friends. At one end of the mantle-shelf are the pedal integuments of the President and the administrative officers; we pass on by those of the learned professors, the patient instructors, the second sub under deputy assistants, the careworn Seniors, the serenely self-confident men of '98, the wicked Sophs, the fresh Freshmen, down to the new janitor's boy. Happy is he of the lot who possesses golf stockings, for their capacity is great! The Lounger loves to imagine the stern deities of the Institute at play. He almost thinks he sees a professor of Geology dressed as the patron saint of the festival, bestowing gifts beneath a tinsel tree; he pictures a professor of Physics playing blind man's bluff with a circle of little nieces and nephews. He imagines a professor of Applied Mechanics catching a blushing damsel beneath the witching mistletoe. These are mere figments of the Lounger's imagination, without foundation of the slightest; but he has more substantial causes for congratulation. The TECH Board lunch under the shadow of the classic elm has passed safely by. The stem and the story passed merrily around, and even the assistant business manager appeared to enjoy himself. More particular sources of pleasant cogitation are there also. A dainty figure in white, a graceful throat, a pair of brown eyes and two waves of soft brown hair help to make up a form which floats before the Lounger's eyes. Brown eyes, or blue, or black, under that same mistletoe mentioned above, there will surely be good opportunities to come for the bold and the deft.

But, alas, while gazing forgetfully into the glowing embers, the Lounger's pipe has gone out. So he will cease this profitless reverie, and close it by wishing to every son of M. I. T. a full stocking, a duly admiring family, a double help of plum pudding, and a pretty girl,—in other words, a merry Christmas.

The Lounger was very happy to assist at the rejuvenation of the French society as a dramatic organization. Truly his heart beat fast at memories of those dazzling ballets of old, and though in less pretentious wise, the old spirit of the Club was still as gay as of yore. Time brings sad changes, to be sure. Who would have thought the fair Henriette could change so much in her old age,—she appears again as Mary Ann? But Monsieur was unchanged except for the restoration of his sacrificed barbe, which by this time has attained more than its wonted splendor. Truly, the hoary walls of Huntington Hall have not witnessed in all the Lowell Institute lecture courses anything exactly resembling the performance of the two Populists who excited strong memories of Keith's, and even other places. Some of their jokes indicated a loyalty to old friends which could not but touch their hearers deeply. The consumption of liquor in the "Character Sketch" was tantalizing to the company present, and it might be well, if the performance is repeated, to pass a little round among the audience, just to show that there is no ill feeling. What interested the Lounger most deeply, however, was to see his friend the Editor in chief lay aside the stern dignity of his office, and cavort about masquerading as a dago. He (the L.) suggested to him (the E. in C.) that it would be a capital scoop for him to publish in the paper a short account of what it was all about, for nobody else knows. From the E. in C.'s manner of treating this idea, the Lounger doesn't believe he knows what it was about himself.
Photography Simplified.

Picture taking with the Improved Bulls-Eye camera is the refinement of photographic luxury. It makes photography easy for the novice—delightful for everybody.


Price. Improved No. 2 Bulls-Eye, for pictures 3½ x 2½ inches, $6.00
Light-proof Film Cartridge, 12 exposures, 3½ x 2½, 60 cents
Complete Developing and Printing Outfit, 1.50

EASTMAN KODAK CO.
Booklet Free. Rochester, N. Y.

In the Equipment of a Student’s Room,

It is generally conceded that a stringed instrument is almost an absolute necessity. To secure the greatest enjoyment from the purchase get the best your money will afford. Expert judgment pronounces the “Bay State” instruments the finest in the world. An excellent instrument is the

BAY STATE SIO BANJO.

We have in stock cheaper banjos than this, but for a substantial, serviceable instrument, at a low price, no other instrument manufactured can compare with it.

SEND FOR ILLUSTRATED CATALOGUE.

JOHN C. HAYNES & CO., 453-463 Washington Street, Boston.

BROWN & SHARPE MANUFACTURING CO., MACHINERY AND TOOLS, PROVIDENCE, R. I.

We wish to express our desire that we and all who read this paper should become well acquainted.

Our Catalogue (366 pages) tells at once more about our business than we can tell in ten years in this space. It is mailed on application.

We cordially invite all those interested in foundry or machine shop practice to visit our works, which now have over five acres of floor space, and employ over thirteen hundred men.

If You Draw,
PURCHASE YOUR

Drafting Instruments,
Drawing and Blue Process Papers,
Scales, Triangles, Curves,
T Squares, Colors, etc.,

FROM THE MANUFACTURERS.

Wadsworth, Howland & Co., INCORPORATED,
Branch Store: Grundmann Studios, adjoining Architectural Building.
Main Office: 82 & 84 Washington St., Boston.
Factories: Malden, Mass.

SPECIAL RATES TO STUDENTS.
### Albert Benari
**Tobacconist**

33 Tremont Street, Boston, Mass.

Agent for the Bohemian Mixture.

Fine Line of French Briar Pipes Always on Hand.

---

### New Tech Pin

**Henry Guild & Son**

Have the best Tech Pin yet for 75 cents; also a combination of gold and silver for $1.00, and Solid Gold at $3.00. For sale at the Institute and

433 Washington St., Boston.

---

### WRIGHT & DITSON

New England's Leading Athletic Outfitters.

**Football Supplies of Every Description.**

- New and improved lace front canvas and moleskin jackets and trousers.
- Head harness, morrell nose and mouth guard, stockings, jerseys, shoes, etc. Send for catalogue.
- Estimates and samples for college, school and club supplies cheerfully furnished. Special attention to mail orders.


WRIGHT & DITSON, 344 Washington Street, Boston, Mass.

---

### Messenger & Jones

Makers of Men's Clothes,

388 Washington St., Boston.

Riding, Knicker and Golf Work a Specialty.

---

### Carey, Teacher of Dancing

212 Boylston Street, Hollander Building.

Most convenient location in the city. Classes for Beginners and Advanced Pupils.

PRIVATE LESSONS.

---

### Students

Are cordially invited to inspect our work, which is a model of neatness, and artistically done. None but competent men employed.

Your patronage is respectfully solicited.

ERNEST M. ALEXANDER.

Copley Square Hotel.

Hair Dressing Parlor,

Cor. Exeter Street and Huntington Ave.

---

### The Brunswick

**Boston.**

Boylston and Clarendon Streets,

(Adjoining Copley Square)

Near the Museum of Fine Arts, New Public Library, New Old South Church, and opposite Trinity (Phillips Brooks') Church, and Institute of Technology.

Kept on Both American and European Plans.

BARNES & DUNKLEE, Proprietors

H. H. Barnes, Manager.
**Week beginning December 28, 1896.**

**Tremont Theatre.**—The last week of De Wolf Hopper in Susa’s charming opera “El Capitan.” This is said to be the best part Mr. Hopper has ever appeared in, and one entirely suited to his peculiar abilities as an entertainer. Edna Wallace Hopper will be seen in the leading female role, “Estrelita.”

**Castle Square Theatre.**—The excellent Castle Square Company will revive Balfe’s “Bohemian Girl.” They have given this delightful opera several times before, and it has been unusually successful. Miss Lane and Mr. Murray both have parts well suited to them.

**Boston Theatre.**—For the first time in Boston, Jacob Litt’s splendid production of the best American melodrama that has been produced in years, “The War of Wealth,” by the author of “In Old Kentucky,” with a fine company and elaborate and costly scenery.

**Park Theatre.**—Last week of the musical comedy, “Lost, Strayed or Stolen.” A distinct vein of humor pervades the entire score, and the airs are unusually bright, catchy and melodious.

**Boston Museum.**—For two weeks only, Wilson Barrett’s remarkable play, “The Sign of the Cross.” The play has had a decided success in London. The cast and scenery are both fine.

**Hollis Street Theatre.**—This will be the last week of that greatest of all American plays, “The Heart of Maryland.” Mrs. Leslie Carter as “Maryland Calvert” is at her very best, and her thrilling swing on the clapper of the old bell is a thing every one should see.

**The Zoo.**—One of the most interesting sights in Boston is to see Chignita during her receptions. Another interesting sight is the feeding of the Carnivora every afternoon and evening.

**Leading Outfitters**

or

**High Grade Mackintoshes**

at popular prices.

For the Principal Colleges in New England, Regular Co-operative Discounts.

**CLEVE & KRIM,**

49 Summer Street, Boston.

**Six Floors of Stationery.**

We occupy the entire building, Nos. 49 and 51, for the Stationery Business. Buy direct of the manufacturers.

**SAMUEL WARD COMPANY,**

No. 49 Franklin Street,

Boston.
Rimless Glasses.

25 per cent Discount.

CO-OPERATIVE LIST.
Oculists' Orders Filled.

FACTORY ON PREMISES.
MAIL ORDERS A SPECIALTY.
CATALOGUES MAILED ON APPLICATION.

C. E. DAVIS,
Manufacturing and Prescription Optician,
2 PARK SQUARE - - - BOSTON.
1 FLIGHT. ELEVATOR.

SENSIBLE CHRISTMAS PRESENTS.

An Ulster, Overcoat, Suit.
We have them at all prices.
We are particularly strong at . . . .

$15.00 and $10.00
at this season of the year. Many of our higher-grade goods marked down from 20 to 30 per cent.

WE INVITE YOUR EXAMINATION.
All grades we offer are reliable qualities; perfect satisfaction is guaranteed or money refunded. Open nights. Don't forget our location. In the wholesale district.

Spitz Bros. & Mork,
67 and 69 Summer Street, Boston.
One minute walk from Washington Street.
Sign of Illuminated Clock.
Manufacturers, Wholesalers, and Retailers.

HIBBARD & MASON
(INCORPORATED)
Tailors,
MUSIC HALL PLACE,
Telephone 579.
Off WINTER STREET.

DRESS SUITS, SILK LINED, TO ORDER, $45.
Dress Suits to Let.

BOSTON.

THE DEANE STEAM PUMP CO.,
HOLYOKE, MASS.
Boston Office . . . . 54 Oliver Street.
PUMPING MACHINERY OF EVERY DESCRIPTION

DEANE INDEPENDENT
CONDENSING APPARATUS.
The Richmond Straight Cut No. 1 Cigarettes.

Cigarette Smokers who are willing to pay a little more than the price charged for the ordinary trade cigarettes, will find this brand superior to all others.

These Cigarettes are made from the brightest, most delicately flavored, and highest cost Gold Leaf grown in Virginia. This is the Old and Original Brand of Straight Cut Cigarettes, and was brought out by us in the year 1875.

Beware of imitations, and observe that the firm name as below is on every package.

ALLEN & GINTER
THE AMERICAN TOBACCO CO., SUCCESSOR,
Manufacturer,
RICHMOND, VIRGINIA.

FOR THE
BICYCLE. DON'T RIDE WITHOUT
A REPAIR KIT. FOR
POND'S EXTRACT is unequaled for quickly
healing all kinds of WOUNDS, BRUISES, LAMENESS or
RHEUMATISM.

Rub thoroughly with POND'S EXTRACT after
every ride to keep the muscles supple, pliant, strong.
Try POND'S EXTRACT OINTMENT for PILES.

AVOID SUBSTITUTES—Weak, Watery, Worthless.

POND’S EXTRACT CO., 76 Fifth Ave., New York.

WE wish to call your attention to our new store, which we have opened at 329 COLUMBUS AVENUE, where we shall carry a full line of MEN’S FURNISHING GOODS, comprising all the latest styles in...

Norwegian, Collars and Cuffs, Hosiery, Gloves,
White and Fancy Bosom Shirts, Underwear.

NEW AND NOBBY GOODS AT LOWEST PRICES.

329 COLUMBUS AVENUE,
(Just below Conklin’s Pharmacy.)

A. COHEN.
AGENCY FOR CAMBRIDGE LAUNDRY.

Established 1843.

“STUDENTS,” ATTENTION!
LARGEST STOCK AND LOWEST PRICES
... ON...

MATHEMATICAL INSTRUMENTS
AND DRAWING MATERIALS OF ALL KINDS, at
FROST & ADAMS COMPANY’S,
IMPORTERS AND WHOLESALE DEALERS,
37 CORNHILL, - - BOSTON.

“Special Rates to Colleges.”

New Illustrated Catalogue Free.
The Union Gymnasium
48 Boylston St. (near Tremont).

PRACTICAL.
Complete Modern Apparatus.
Popular Classes.
Terms, $5 and $8 per Year.

BOSTON YOUNG MEN'S CHRISTIAN UNION.
WM. H. BALDWIN, Pres.
GEORGE PRICE, Sec'y.

Elmer Chickering,
The Leading Photographer.

SPECIAL RATES TO STUDENTS.

NEW + MAIL

HIGHEST GRADE LIGHT ROADSTER.
$85.

MEN'S AND LADIES' pattern . . . . $85
Also TEMPLAR medium grade Men's Wheel . $60
ATALANTA, Ladies' Pattern . . . . $60
Boys' and Girls' Wheels . . . . . . . $15 up

Now closing out a few Shopworn and Secondhand Wheels, taken in trade, at very low prices. Bargains. $25, $30, etc.
Catalogue and Secondhand list.

WILLIAM READ & SONS
107 Washington Street, Boston.

Elmer Chickering,
The Leading Photographer.

THERE is not a photographer in New England who has been more successful than Elmer Chickering, of No. 21 West Street, and people who desire to have first-class photographs taken, of themselves, or of their friends, should go to this gallery. His success in the business is wonderful. His pictures are admitted to be exact reproductions of the subject, and are remarkable for their clearness and fidelity in detail. Among his patrons are the leading citizens of the United States, including presidents, governors, mayors, and others prominent in official lines, the highest military officers, the most prominent opera singers, the leading actors and actresses. Far and near his pictures are known. In Europe as well as America they are highly admired. Mr. Chickering is a host in himself, but with good judgment he has surrounded himself with a corps of operators and assistants in his operating rooms who have no superiors, while in his office is to be found young lady attendants who thoroughly understand how to please patrons, and by their uniform courtesy add much to the popularity of "Chickering's Studio."

NECKWEAR

THE L. E. FLETCHER CO.
College Hatters and Outfitters.
Latest Styles and Popular Prices. Custom Shirts a Specialty.
M. I. T. CO-OPERATIVE SOCIETY.
No. 158 Boylston Street, Boston.

UMBRELLAS

GLOVES

CANES