



THE TECH

MEMORIAL
NUMBER.



VOLUME XVII.

NUMBER 14.

JANUARY 6, 1898.



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.

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.

All Goods Required by
 Students at
·MACLACHLAN'S·
 214 CLARENDON STREET.

Drawing Instruments and Materials, etc.
 Fountain Pens, Text Books.

ARARAT LUNCH,
 351-A Columbus Ave. (near Dartmouth).

All Fruits, Confectionery, Pastry, etc. Very best lunch
 at most reasonable prices.

MEAL TICKETS WORTH \$2.30 ONLY \$2.00.

CIGARS AND TOBACCO. PATRONAGE SOLICITED.

HEADQUARTERS OF TURKISH AND STUDENTS' CIGARETTES.

I. WHITE,
Merchant Tailor.

Suits made to order from	-	\$15 to 20
Coats " " " "	-	18 to 25
Pants " " " "	-	4 to 6

Notice.—Specialty on Cleaning, Pressing,
 and Repairing.

306-A Columbus Avenue, Boston.

W. J. CONKLIN & CO.
Apothecaries,

Conklin's Corner, Columbus Ave. and Dartmouth St.

DRUGS.
CHEMICALS.
TOILET ARTICLES.
NOTE PAPERS.
CANDIES.
SODA.
CIGARS.

Specialties.

Albaderma, guaranteed to cure
 Chapped Skin at one application.

Conklin's Cough Cure,
 guaranteed to cure Cough.

Conklin's Tooth Powder,
 the Best on the Market.

Cold Cream.

SUB STATION P. O. No. 17.

Discount to Tech. Students.

Wanted—Short Stories.

A Subscription for each one published.

Offer good for One Month.

STUDENTS' SUPPLIES.

Writing Paper and Envelopes with TECH. Monogram and Imprint.

PERIODICALS AND MAGAZINES.

LAUNDRY AGENCY. Superior quality of Work. We call for and deliver goods.

SOUTHWELL'S,

Corner Dartmouth Street and Columbus Avenue.

E. O. SABINE, Ladies' and Gents' Dining Room

21 MEAL TICKETS, \$5.00.

Nos. 202 and 204 Dartmouth Street.

Scientific Books } DAMRELL & UPHAM,
The Old Corner Bookstore,
283 Washington St., Boston.

Read the Tech Advertisements and Patronize the Advertisers.



G. W. WATSON, NEW YORK CLOTHING,

Park Square,
Opposite Providence Depot,
BOSTON.

Dress Suits To Let.

Please mention "Tech."

Open Evenings.

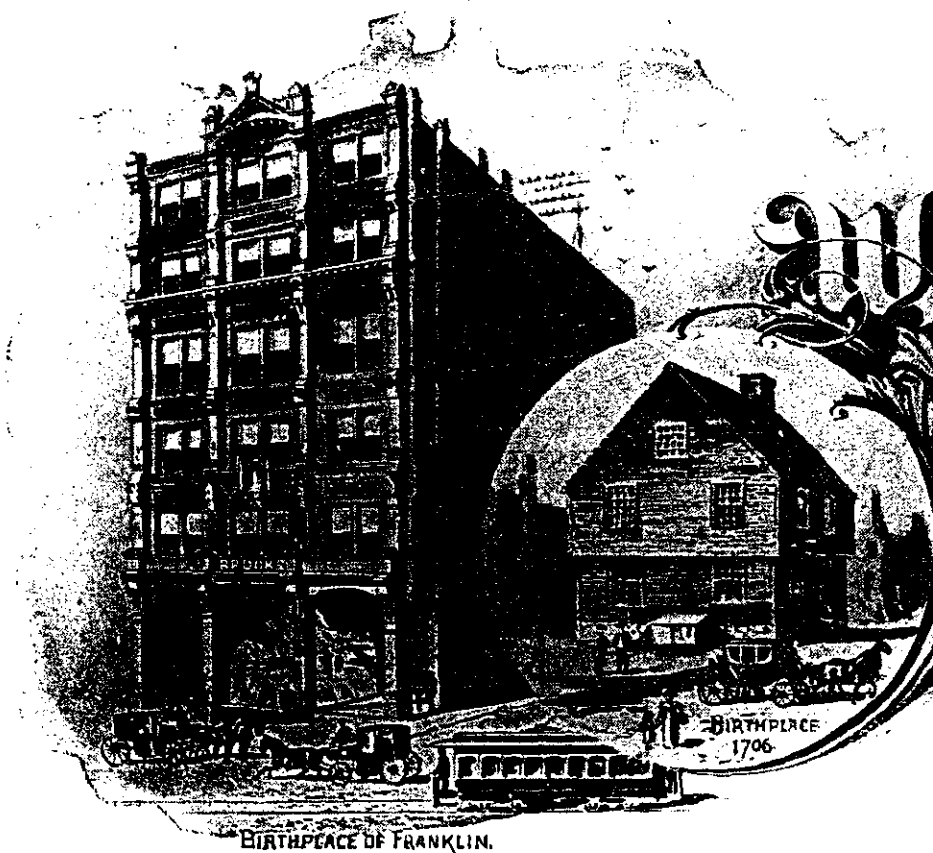
TRADE MARK

COLLINS & FAIRBANKS
CELEBRATED
HATS

SOLE AGENTS
FOR
HENRY HEATH'S AND
A.J. WHITE'S LONDON
HATS

STYLES CORRECT
QUALITY UNEQUALLED

381
WASHINGTON ST. BOSTON



Brooks & Co.
Importing Tailors

15 MILK STREET.
OPPOSITE OLD SOUTH CHURCH.

LONDON OFFICE, 6 SAVILE ROW,

BIRTHPLACE OF FRANKLIN.

BIRTHPLACE 1706

THE LARGEST ASSORTMENT OF FOREIGN WOOLLENS SHOWN IN BOSTON

M. I. T. CO-OPERATIVE.

THE TECH

VOL. XVII.

BOSTON, JANUARY 6, 1898.

NO. 14.

THE TECH

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

JOHN MAGEE, '99, *Editor in Chief*.
MORGAN BARNEY, 1900, *Assistant Editor in Chief*.
THOMAS EDDY TALLMADGE, '98, *Secretary*.
CHARLES-EDWARD AMORY WINSLOW, '98.
GERALD MARTIN RICHMOND, '99.
CLARENCE RENSHAW, '99.
HARRY LEONARD MORSE, '99.
PAUL RAYMOND BROOKS, 1900.
SULLIVAN WILLIAMS JONES, 1900.
PHILIP COOMBS PEARSON, '01.

W. R. STRICKLAND, '98, *Business Manager*.
MAURICE DAVENPORT, 1900, { *Assistant Business Managers*.
EDWARD B. COOKE, 1901, {

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.

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

Frank Wood, Printer, 352 Washington Street, Boston.

Entered in Post Office, Boston, Mass., as Second Class Matter.

"He stood a soldier to the last right end.
A perfect patriot and a noble friend."

—B. Jonson, *A Pindaric Ode*.

"FRANCIS AMASA WALKER, soldier, economist, statistician." These words recall an active life full of victory and achievement; but, grand as they are, they suggest but a part of the work of one of the noblest men who ever lived. To us, as we behold the bust of our late President, as it silently overlooks the busy life in Rogers corridor, his commanding figure is recalled with the clearness of yesterday. Indeed, who can forget it, or that gracious bow and ever courteous greeting bestowed alike on one and all.

He was our hero; we worshiped him. Others who come after us can never know the beauty of his personality; they will associate the name of Walker only with that magnificent monument of the work of fifteen of the best years of his life,—the Massachusetts Institute of Technology. But may they and we strive to carry on the work of our great President, ever keeping the Institute in the front rank of the world's scientific schools.

Technology owes her individuality and her successes to Francis Amasa Walker; may she never forget his great presidency, and may she follow unswervingly the policy laid down by his unerring judgment.



It should be an uncontested hypothesis that every Technology man wishes present and increasing success to his Alma Mater. It is an acknowledged fact that just as soon as a man or an organization begins to perform his or its proper functions as a mere machine, he or it is looked upon with an interest rising alone from what, as a machine, he can turn out. This interest excites no consideration of the welfare of the man himself, or any warm interest in the success of the organization. When, therefore, a man disregards all phases of a college's usefulness, except the narrow and merely mechanical one of crowding facts into his more or less receptive skull, he is beginning to regard it as a machine, and in it as such to lose the proper, helpful interest, which has in the past helped to build up so many institutions of learning. It is true that the influences toward this state of mind are strong, especially in our Institute, whose rigid requirements demand such close application; but if strong, they should be only the more strongly fought against, and all influences to a broader sentiment, a nobler idea of what the college should mean to us, a greater "college spirit" and love for it as our Alma Mater, should find our minds open and eager to receive them.

In the concrete can we consistently say that we wish for the success of the Institute, and at

the same time think of it and treat it as so much "applied," so much "Theoret," so much of a dozen other difficulties? We cannot. A man who has the interest of the Institute at heart will enter into the spirit of it, as he each day looks up to and receives the learning given by its minds. He will take interest and part in class affairs, even before the class-day elections. He will attend the meetings of the athletic associations, and see that the right men are elected to preside over them. He will take an active interest in class and college athletics, and encourage them by his presence at the meets whenever possible. In fact, he will stand, not in the position of a man who, having sunk money in an enterprise, stands by to get his "money's worth," but in the position of a son to his Alma Mater, in whose every action he is interested.



It is to be regretted that the students have shown so little interest in the study of German that they have allowed a once prosperous society to drop out of existence. Der Deutsche Verein, a short time ago, was one of the leading literary societies of Technology, noted alike for its progressiveness and liberality of ideas, and for the excellence of its theatricals. On account of indebtedness incurred in the latter, the membership gradually dwindled so that by the time all bills were paid the members allowed the society to go out of existence.

At present there seems to be a desire on the part of former members to begin anew. The objects at which the society aim are of a high and worthy character, and the new interest in the undertaking should meet with hearty support from the students, especially as the German professors have announced their willingness to render the society their active support.

Annual Alumni Dinner.

THE annual meeting of the M. I. T. Alumni Association was held at half past four last Thursday at the Exchange Club. The following officers of the Association were elected for the year: John R. Freeman, '76, President; Edwin C. Miller, '79, Vice President; Augustus H. Gill, '84, Secretary; Charles T. Main, '76, and Frederick H. Fay, '93, Executive Committee for two years; John Alden, '77, Alumni Committee on the school for three years.

Amendments to the constitution were adopted providing for an increase of membership in the Association by the admission of a larger number of persons having an interest in the school than has hitherto been possible.

The appointment of a graduate member of the Advisory Council was referred to a Committee.

The meeting adjourned to the dining room of the Club shortly before seven to partake of a repast worthy of Epicurus. The table was very tastefully decorated, the *menu* was excellent, and the addresses admirable.

Immediately after the dinner, Mr. John R. Freeman, President of the Association, introduced Col. Frank C. Locke, of the Governor's Staff.

Colonel Locke read the annual report of the Alumni Committee on the school, in which, after affectionate reference to the late President Walker, it was announced that the erection of a new building is about to be realized, through the bequests to the Institute made in the past year.

He stated that the building will be on Trinity Place, five stories high, 150 feet long, and 50 wide, and is to be mainly devoted to architecture and biology.

The removal of those two departments will permit the extension of the geological, civil, and mechanical engineering departments. There will also be recitation and lecture rooms, allowing for the extension of chemistry and

physics in the old, while the transfer of the lunch room will give more room to the mining department.

A closer touch between the school and alumni was recommended by the Alumni Committee on the school, to be obtained by enlarging the Committee, and making it more truly a visiting one comprising representatives of various courses.

Speaking of the remarkable growth of the Institute, he stated that in its first 20 years the benefactions received amounted to \$542,228; in the next ten years to \$718,193; the next five years, \$629,221; a total of \$1,889,642.

In the present year bequests amounting to nearly \$1,000,000 have already been received, and will provide for immediate and great improvements, besides leaving a handsome surplus to provide for a steady income. He also spoke of the proposed scheme for the combination of Tech. and Harvard, but made no definite statements from want of data. He spoke, however, of the influence which the Alumni should have over the Corporation in this matter.

The report, which was ably prepared, was signed by Colonel Locke, Edward W. Rollins, and Edward Cunningham.

Mr. Locke's mention of the election this year of James P. Munroe, '82, to the Corporation, was received with great applause.

Pres. James M. Crafts was next greeted. He told of the Randall bequest, by which the school receives next spring \$50,000; and also mentioned the recent bequest of the late Hon. Henry L. Pierce, which amounted to over \$700,000.

As regards the removal of the school to the country, and finding a magnificent location like that of Cornell, he brought up the fact that one third of the students live within a half-hour's ride of Boston, and the intellectual stimulus of Boston was sufficient to keep the school in the city.

The president then spoke of the recent discoveries which had made science fashionable.

The Technology alumni, said the president, probably hold together better than those of other colleges on account of their professional feeling. Of the graduates in mechanical engineering, President Crafts had found ninety-five per cent of them engaged in the profession for which they had studied.

Mr. Freeman next introduced Prof. Elihu Thomson, who spoke on "High Voltages and Liquid Air." He said that with the present development of high voltages, an electrical power plant could furnish a full-fledged thunder storm on short notice, and a continuous storm at that. Sparks five feet long and voltages of 750,000 were now obtained without difficulty.

Professor Thomson told of some interesting experiments at Lynn with liquid air. It was brought from New York in a milk can, covered with felt three inches thick. Less than thirty per cent was lost by radiation. When the liquid air was poured into a glass it boiled at first, and then settled down as the glass cooled, the evaporating air forming a jacket over the liquid, and drops of it, when poured on a table, rolled about like water on a hot stove.

Rubber, when immersed in the liquid, became as hard as steel. Butter, after being dipped in it, flew into a powder on the slightest blow; iron fell to pieces on being struck; copper was not affected, and lead grew tough and springy. Mercury, after a dip in the liquid air, became hard, so that it could be put into a vise and filed.

Professor Thomson said that the liquid air might be used in preparing insulators for wires for heavy currents of electricity. In this case it would solve the problem of long-distance transmission of heavy voltages.

It has another use in the future. As nitrogen evaporates first from liquid air, it could be employed in a fractional distillation of oxygen. After the evaporation of the oxygen, a solid, white crust is left in the vessel. This is argon, which soon volatilizes at a temperature below freezing.

Incidentally he declared that he does not believe in patents, as they are against the public welfare, though at present he found it necessary to violate his principles in that regard. He asserted that in his belief not one tenth of the patents granted are for what can be legitimately regarded as actual inventions.

The last speaker was George S. Morison, a distinguished western engineer, who is said to have built every bridge across the Mississippi river, save one. Mr. Morison gave a very interesting talk on civil engineering.

It was also expected that Mr. Samuel J. Elder would speak, but he was obliged to leave early. The evening was greatly enjoyed by the 160 members present.

New Year's Eve at the Club.

SOME seventy Seniors assembled at the Technology Club last Friday night to greet the new year which has been honored with the name of their class. The men dropped in all the evening, and the affair was quite informal and very enjoyable. About nine o'clock Professor Sedgwick made a characteristic speech, in which he spoke of the close union at present existing between the students and the Alumni. At frequent intervals the Glee, Banjo, and Mandolin Clubs gave selections, while general choruses and renderings of the "Happy Hottentot" by a Course IV. delegation varied the programme. At eleven o'clock supper was served, and just before midnight the Class reassembled in the common room and executed a grand march. The stroke of midnight was drowned by rousing '98 and M. I. T. cheers, which were repeated on Rogers steps, after general handshakings and good wishes.

Votes of thanks were passed during the evening to the Technology Club and to the musical societies.

The Unveiling Exercises.

THE memorial to President Walker was unveiled yesterday afternoon by his son, Mr. Ambrose Walker, after brief exercises in Huntington Hall, at which President Crafts presided. Seats were reserved for the invited guests, and for the three upper classes now at the Institute. Ninety-seven was also represented. Some members of 1901 were allowed to occupy the remaining seats. The President of the Institute spoke briefly in introduction of Mr. C.-E. A. Winslow, '98, chairman of the student committee. Mr. Winslow said:—

Mr. President: On the 5th of January, 1897, one year ago to-day, President Walker died. On the 7th of January a mass meeting of the students was held in this hall to adopt resolutions expressing the grief of the undergraduate body. At this meeting it was voted that a committee of three make arrangements for a student memorial to the late President; Mr. Bancroft, of '97, Chairman of the meeting, appointed Mr. Hurd, '97, Mr. Washburn, '97, and myself to serve as this committee.

The committee decided to secure the erection of a bust as the most fitting memorial within their power; and, for its execution, turned to Mr. Daniel Chester French as an eminent sculptor and as a personal friend of General Walker's. The committee wish to express their special gratitude to Mr. French for what has been, in a large measure, a labor of love. Unfortunately he is not here to-day so that we can thank him in person for the generous care which he has given to this matter; but he may be assured that the members of the Institute will not forget it.

The funds for the monument the committee wished to obtain entirely from the undergraduate body; this was done before the end of the term, the sum being completed by a generous gift from the Class of '97.

During the summer the bust was modelled; the autumn has been taken up in casting it and in constructing the tablet and the bracket

upon which it rests. The completed monument now stands in the corridor below; and the committee are prepared to-day, in the name of the students of the Massachusetts Institute of Technology in the Classes of 1897, 1898, 1899, and 1900, to present it to the Corporation of the Institute.

This bust is not needed, sir, as a monument to President Walker. President Walker's monument is found in something more enduring than marble or than bronze, in the great school which he built up until it led the world. President Walker's monument is found in something more beautiful than any creation of the sculptor's art, in the strong and noble characters which have drawn their inspiration from him, and molded themselves after his example. The students of the Institute can erect a true memorial only by living after the manner of him who held that the mission of education was to make men, and by exhibiting increasing loyalty to the school which he believed was better equipped than any other to fulfill that mission.

It is, then, chiefly to satisfy the need we feel to express our own emotions, Mr. President, that we have erected this memorial. We want to say, in some fashion which shall last as long as this building stands, that we were not quite unworthy of the great man with whom it was our fortune to come in contact here; that we repaid the friendship which he gave to every one of us with an admiration, a devotion which is too deep for words.

And we ask you to let this bust of President Walker stand in the corridor, Mr. President, because we want the students of the future to know something of his presence as we knew it. General Walker, while he lived, was not content to be merely a great name to his pupils; he must not become so now. His personality, which knit every Institute man to itself with special individual bonds, must never fade from memory.

As you look upon the enduring bronze below, transfigured by the touch of a com-

elling art, you will feel that this Personality is with us once again. You will see in that eloquent face the courage which was undaunted by the rout of Chancellorsville, the energy which revolutionized the United States Census, the broad, clear vision which established an epoch in Political Economy, the loyalty and devotion which built up this institution, the modesty, the hopefulness, the enthusiasm, which made President Walker our ideal of all that we hold true and manly.

And as we see his firm, clear gaze looking into the future, we are assured that his spirit is with us at Technology; and that the Institute which he so loved will go on advancing in the path which he has set for it, glorying not in wealth and mere material prosperity, but chiefly in its unswerving loyalty to the great men and the great traditions of its past.

Professor Crafts then said:—

Gentlemen: It is rare that the monument, which is to recall forever the living features of a great man, is so soon set upon its pedestal. You have been told that the idea of such a memorial arose spontaneously with the first public expression of sorrow at a meeting held by the students two days after General Walker's death.

There was no need to seek far for a sculptor; a very distinguished one was among the wide circle of warm personal friends of General Walker. He willingly undertook the task, and has completed it so soon that it can be unveiled on this anniversary. We all join in the regret that he cannot himself lift the veil.

In a few moments, when the bust is unveiled by a loving hand, we shall see the features of our friend and leader, and it is a satisfaction to feel that whoever looks upon them in after years can read in the bronze image something of the familiar story of the life that he led among us. It is a good fortune for an honest man to have a face expressive of character, a face and bearing that make friends before a word is spoken, a suf-

ficient presentation to any society, a passport to the good will of all. The likeness of General Walker will tell to all beholders in the years to come that here was a frank and faithful man, social and courageous, earnest in whatever he undertook to do, and capable of doing much.

I do not know how far those historians are right who, like Michelet, have sometimes undertaken to correct or set aside the judgments which their predecessors had founded upon old documents, bringing in their place an estimate of character taken from the lineaments of a newly discovered portrait; but I am inclined to put some faith in the process, when I see how well nature has stamped the seal of her nobility upon the face we have all looked upon with affection and trust.

The inscription upon the tablet, "Soldier, Economist, Statistician," tells us the paths of life over which he walked, but only the bust below can tell us how the soldier squared his shoulders to his task, and strode straight onwards in the path of duty, how his eye lit up with enthusiasm that made men follow him, how the scholar read mankind as his open book.

If we ask ourselves with all seriousness the question of the poet,

"Can storied urn or animated bust
Back to its mansion call the fleeting breath?
Can Honor's voice provoke the silent dust?"

let us cherish the belief which we find in our hearts, that Honor's voice may evoke the spirit, though it cannot provoke the silent dust; and the spirit present this day would surely find no offering more suitable, than the one so well spoken in your names by the representative of the students, the dedication of your young lives to the straightforward, manly work which your leader loved so well, and tried to make you love as the best education. This is the last and the most enduring of the tributes paid to him who was our president from 1881 to 1897, erected, as the inscription says, by "the last body of undergraduates of

his great presidency, the classes of 1897-1898-1899 and 1900."

Gentlemen, in the name of the government of the Institute, I thank you for the gift. Your affection and ours will unite in making it a sacred memorial, and a token to all the classes yet to come, of our respect for the man who continued so well the work begun by President Rogers. The two men, whose effigies stand on either side of the hall, had the great qualities necessary to build up a great school, and we shall ever look upon them with love and reverence.

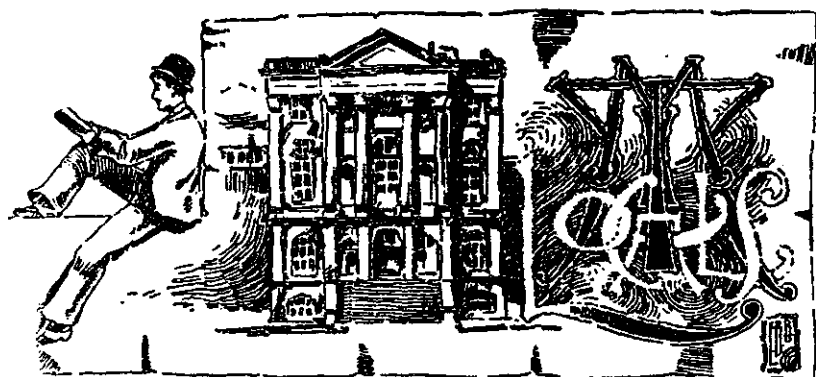
He ended with a request that those present should follow the invited guests to the corridor below, where the bronze rests on its marble bracket. Here the flag, which had till then concealed the bust, was drawn by Mr. Ambrose Walker. During the ceremony the Glee Club's rendering of "Integer Vitæ" added a sacred touch to the already solemn ceremony.

The ushers were G. R. Wadsworth, '98, chief usher, J. S. Bleecker, '98, L. D. Gardner, '98, K. M. Blake, '99, J. Magee, '99, L. Stewart, 1900, and M. Barney, 1900.

The ceremony was witnessed by many, although the number of undergraduates was not as large as it should have been. The bust now rests on the left side of the corridor of Rogers Building, on a bracket of Verona marble, and is a remarkable likeness of our late president, as may be seen from the supplementary page which accompanies this number of THE TECH.

Great praise is due to Mr. French and to the student committee for the way in which they have done this work, and we feel sure that they have the sincere thanks of everyone at the Institute.

The strong character of this great man, which will have a living exponent in the Massachusetts Institute of Technology as long as it may exist, shows forth clearly in the bronze, and will act as an incentive and inspiration for classes to come in the future.



The regular weekly handicap games will come off as usual next Wednesday.

There was no meeting of L'Avenir yesterday, owing to the presentation of the Walker Memorial.

A meeting of Der Deutsche Verein was held on Tuesday, January the 4th, at four, in room 22, Rogers building.

Prof. F. P. Emery of Dartmouth, formerly a popular instructor in English at the M. I. T., visited the Institute on Monday.

Subscriptions to THE TECH are now due. They may be paid to members of the Board, or at THE TECH office on Saturdays, from 12 to 1.30 P. M.

Mr. Albert Sauveur, Tech., '89, will lecture to the class in Metallurgy of Iron, upon the microscopical structure of steel, on the 12th of January.

While at a Glee Club rehearsal last Tuesday, Mr. E. T. Hildreth slipped and broke his leg. The club has sustained a severe loss by his temporary absence.

At a meeting of the Geological Club on Thursday last, Miss Elizabeth F. Fisher, '96, gave a very interesting talk on "A Visit to the Russian Oil Regions at Baku."

The next regular meeting of the Mining Engineering Society will be held in Room 36, Rogers, at 4.15 P. M., Wednesday, January 12th. Professor Richards will address the Society.

Two papers of exceptional interest were read at the Biological Club on Monday, one by C.-E. A. Winslow, '98, on "Bacteria in Ice," and one by Miss Forrest, '98, on "Bacteria in Market Butter."

Mr. P. H. Hogan, Chief Engineer of the Institute, was presented with a gold medal last Monday by Lodge 12 of the New England Society of Stationary Engineers. Mr. Hogan has been president of the society for two years, and has just resigned.

The collection of the '00 Class assessment for the paying off of the debt, incurred by the last Intercollegiate drill, commenced last Saturday. Receipts, signed by Treasurer Belknap, are being given to all members of the class who pay the full assessment of \$1.15.

At a meeting of the M. I. T. Yacht Club the following members were elected: Professor Swan and C. H. Crane, honorary, and E. B. Cooke, 1901, and E. Ritchie, 1901, active. Mr. Crane raced the half-rater El Hierie two years ago, and last year the one-rater Al Anka.

Mr. Boos is to be congratulated on the large number of men who take advantage of his instruction in gymnastics. The class which assembles every afternoon manifests a refreshing interest in the work, and exhibits a desire to obtain all the good from it they can. Very few colleges can show classes of this character which do not shirk their work.

The '98 election of nominating committee for class day officers resulted as follows: L. Alland, R. Allyn, J. S. Bleeker, H. L. Bodwell, E. S. Chapin, H. L. Coburn, H. K. Conklin, F. E. Coombs, E. N. Curtis, H. Fisher, J. E. Hazeltine, C. S. High, G. A. Hutchinson, G. E. Mathews, D. Mayer, S. M. Milliken, S. S. Philbrick, E. F. Russ, L. S. String, W. R. Strickland, T. E. Tallmadge, G. F. Ulmer, G. R. Wadsworth, C.-E. A. Winslow, W. G. Zimmerman.

SOME BORROWED WIT.

Footless : Golf stockings.—*Yale Record*.

1901. POOR BOY.

He : "I have a constant load on my mind."

She : "What for, to keep from losing it?"

—*U. of M. Wrinkle*.

SNAP SHOTS.

Jackson : "Is it easy to take photographs with that camera?"

Johnson : "Yes ; it is a regular snap."

—*Princeton Tiger*.

WITHOUT A DOUBT.

Morrill : "I wonder why it is that Jimmy consults his own watch fifty times a day, when the Library clock is staring him right in the face?"

White : "No doubt there's a woman in the case."—*Cornell Widow*.

Why?

I wonder why the Institute

Is builded six miles high,

And flights of stairs and landings

Go winding to the sky?

I wonder why?

I wonder why the "plates" are due

A couple in a day,

And work and lessons double up

In such a weary way?

I wonder why?

I wonder why the chocolate pie

Is always giving out,

And all the oyster stew is gone

Before I get about?

I wonder why?

There are so many curious things

I would they were not so ;

And yet, we think the Institute

So jolly, don't you know?

I wonder why? S. D. T., '96.

Some folks ride a prancing horse,

And some their wheel, so nobby ;

Some prefer the trolley-car,

But some just ride their hobby. H. C.

To Students. Are you fully aware that you can furnish your rooms from

Houghton & Dutton's,

For less money than from any other house in Boston? We give you below a very few hints ; run them down and convince yourselves of the truthfulness of our claim.

FURNITURE.

White Enamelled Beds, with brass trimmings, etc.,	\$3.98 to \$12.98
Mattresses in great variety	2.00 " 18.98
All-feather Pillows	.97 " 5.00
Bed Springs	1.25 " 6.98
Chamber Suites, various woods and styles .	11.48 upward.
Chiffonnières	4.87 to 15.98
Plush and Rattan Rockers, every style .	1.47 " 19.98
Lounges and Couches, every style	4.98 upward.
Chiffonnière Beds, with mattresses and springs,	14.98 "

STUDENT LAMPS.

The nickel-plated "Perfection," the best and most popular lamp for study or for reading . . .	\$2.73
Decorated China Cuspidores	.39 to \$4.98

GLASSWARE.

Real cut-glass Decanters, flute necks and star bottoms,	49 cents.
Thin-blown Crystal Tumblers	36 cents upward.
Initials engraved to order when desired.	

RUGS.

Carpet Sizes.

Wool Ingrains, 3 x 2 yards	\$3.78
" " 3 x 2½ yards	4.98
" " 3 x 3½ yards	6.88
" " 3 x 4 yards	7.92
Dantsu, 3½ x 2½ yards	8.58
" 4 x 3 yards	10.98
Smyrna, 3½ x 2½ yards	15.98
" 4 x 3 yards	22.48
Japanese, 3 x 2 yards	4.98

UPHOLSTERY.

This you will find an admirably equipped and conducted department. CURTAINS and DRAPERIES of all kinds, SOFA PILLOWS, etc., always at BOTTOM PRICES. SPECIAL ORDERS executed by skilful workmen, measurements and estimates being made FREE OF CHARGE, on orders either large or small.

Professor Mitsukuri of the Imperial University of Tokyo, Japan, who lectures this week before the Lowell Institute in Huntington Hall, was formerly a schoolfellow of Professor Sedgwick, and is now his guest. He reports that Fukuzawa, who graduated from the Institute in '88, is now editor of a prominent independent paper in Tokyo, and that he is holding an influential position there.

The boiler tests began last Monday, there being thirteen watches of eight hours each, the principal objects of the work being the testing of temperatures at different parts of the boiler, together with analysis of escaping gases. The Babcock and Wilcox Boiler No. 1 carrying one hundred and twenty-five and one hundred and fifty pounds pressure will be used. Since the tests of last year many improvements have been made, which will increase economy in coal and lessen the amount of smoke. All the tests this year will be made in the boiler room.



Correspondence solicited from all who have been connected with the Institute.

'88. Mr. W. H. Gerrish, Course II., is now filling the position of treasurer of the Lancaster Slate Co., of Somerville, Mass.

'88. Mr. Geo. L. Harvey, Course II., has still his office as architect and mechanical engineer, at 115 Monroe Street, Chicago.

'89. Mr. H. H. Hunt, Course VI., is an electrical engineer, with an office in the Equitable Building, Boston.

'89. Mr. Lewis E. Johnson, Course II., is now engineer in the bridge and construction

department of the Pennsylvania Steel Co., Steelton, Pa.

'91. Miss Ethel Blackwell, M.D., Course VII., has been appointed assistant in Histology in the Woman's Medical College of the New York Infirmary.

'91. Mr. Reuben B. Collins, Course I., has been made assistant inspector of the Metropolitan Water Board of Boston.



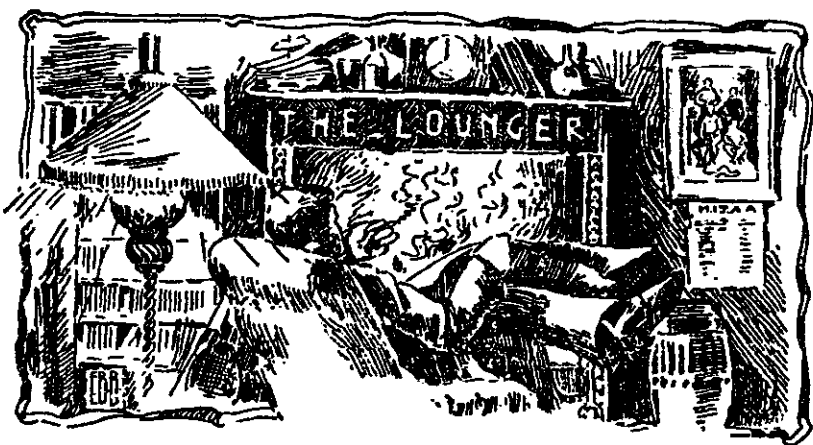
The Polo team was not active last week, on account of Captain Hopkins's illness. Work was resumed Saturday.

It is unfortunate that the weekly handicap games have been suffered to lapse. The scheme gave promise of most gratifying results.

Captain Wentworth has been called home by the death of his brother, and will not return until after the mid-year recess. Our sympathy is with him in his sorrow.

The Hare and Hounds run was omitted Saturday, on account of the bad footing. The run at Clarendon Hills this week will be the last until after the mid-year recess, and should be well attended.

A scrub team from the Institute played a Harvard team a practice game of hockey on Spy Pond Saturday. Score, Harvard 7; Institute 0. The Tech. men, especially Hopkins, Walworth and Cobb, put up a good game, but as many of the players were unacquainted with each other, and a few had not played the game, the score is not discreditable.



TRULY the Lounger was mortified to learn of the unseemly conduct of one of our most promising instructors in Mechanical Engineering the other afternoon. The facts of the case are nearly as follows: In the course of an afternoon's drawing a bottle of small beer, such as may be purchased at any stand for the modest consideration of a dime, was seen frantically waving in the hand of a certain swift member of Course II. Whereupon the above-mentioned instructor rushed madly upon the scene, and with much to-do sternly reprimanded the unoffending student, the while making many inquiries as to the ownership of the beer. Needless to say, the familiar bottle remained friendless, resting uneasily upon the neighboring desk. Whereupon our unassuming instructor of youth led the aforesaid draughtsman from the room, and carried the beverage into his den. The question remains, What did he do with it? and in the opinion of the Lounger it is one not easily answered; for if he threw it from the window into the neighboring lot it was but snatching it from the frying pan into the fire, as some greedy architect must surely have seized upon it, as upon a godsend, when it alighted. And thus would another simple creature have gone astray. But if, as the Lounger half surmises, he himself emptied the contents of the bottle, how in the name of all that is unworthy can he face the mantling eyebrows of the offended members of Course II.? An explanation from the very distinguished gentleman seems to be in order. The Lounger can understand why the instructor should have upset his ink bottle, and dashed to the near neighborhood of that other bottle and earnestly inquired for its ownership. It was doubtless due to reflex action. But why should he then have expelled its owner? This truly staggers the most profound student of human nature. In a German institute it would perhaps have been cause to expel if the student appeared without a bottle. But such is the mystery of man. And surely

something seems to have been lacking in courtesy in that, when our esteemed friend so clearly expressed his desires; no one should have gallantly presented him with the article.

The Red and Blue, a journal emanating from the University of Pennsylvania (whose colors young Mr. Ten Eyck is to wear at Henley, according to the newspapers), makes exceeding merry over the wording of the very sensible ordinance in the Boston street cars relative to spitting on the floor. *The Red and Blue* says, "Nowhere else, save in Boston, would such a thing be possible. No other city's board of health would bother to discourse learnedly about the characteristics of sputum. Pseudo-erudition always emasculates. It is the natural and unfailing effect. As long as people are anxious to express thoughts which they do not have, although they try to deceive themselves into believing that they have, so long will the King's English be mutilated." Was there ever a passage which condemned itself so neatly? Talk about "pseudo-erudition" "emasculating"! And what is "the natural and unfailing effect"? "Pseudo-erudition" or "sputum"? Ye Gods! Surely the "King's English" will be mutilated as long as the man who wrote that editorial remains on the staff of *The Red and Blue*.

The Lounger is pleased to note that the rigid asceticism of Technology life is undergoing a temporary abatement. The Senior Class in particular appears to be warding off the shadows of the approaching semies by a vigorous application to the science of enjoyment. That dinner at the Exchange Club, if Dame Rumor speak truly, was the occasion of a cheerful conviviality scarcely to be expected from a band of the elect, who forbade all intoxicating beverages less than three years ago. New Year's eve, also, furnished an opportunity for much relaxation and good comradeship, though of the anhydrous variety. The Lounger, on his way home from certain celebrations of his own, stopped at the Club, and was moved by the sound of a thunderous tramp of feet to ascend the stairway, and look into the room above. There he found the dignified elders of the Institute, the engineers and scientists of the future, careering about the room in an endless chain, each man with his hands on the shoulder of the man in front.

TURNER, Tailor,

268 Boylston St., Boston.

(OPPOSITE SUBWAY ENTRANCE.)

Clothing Cleansed, Repaired and
Pressed in a Thorough Manner.

DISCOUNT TO STUDENTS.

Students Will Find

SUPERIOR

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

AT THE MANUFACTURERS.

Wadsworth, Howland & Co.,

INCORPORATED,

218 CLARENDON STREET.

Main Office: 82 & 84 Washington St., Boston.

Factories: Malden, Mass.

SPECIAL RATES TO STUDENTS.

SHOES.... for Young Men

New Fall Styles.
Newest Shades.
Newest Shapes.

\$4.00 UP.

Ten Per Cent Discount to Students.

HENRY H. TUTTLE

AND COMPANY.

Corner Washington and Winter Streets,
BOSTON.

CUSTOM DEPARTMENT.

Continental Clothing House

Great Mark-Down Sale.

To reduce our present stock of **Genuine Scotch Suitings**,
many of which we have been selling at \$30, \$35 and \$40,

\$25.00.

The mildness of the season has limited the sale of the
Overcoats in this department, and we have made a re-
duction in price amounting to fully

25 per cent.

At this time we shall inaugurate one of our **Famous
Trousers Sales**, the popularity of which is world-wide.

Trousers, \$5.00. Trousers, \$6.00.
Trousers, \$7.00.

CUSTOM DEPARTMENT,

Continental Clothing House,

651 Washington Street, 18 Boylston Street.

GEORGE H. LANE, PROP.

ALBERT BENARI, Tobacconist,

33 TREMONT STREET, - - BOSTON, MASS.

Agent for the Bohemian Mixture.

FINE LINE OF FRENCH BRIAR PIPES ALWAYS
ON HAND.

WRIGHT & DITSON, New England's Leading Athletic Outfitters,

Offer every requisite in FOOTBALL SUPPLIES, UNI-
FORMS, SHOES, PROTECTORS, SWEATERS, ETC.

Managers should write for samples and special rates before purchasing.

THE SPALDING OFFICIAL FOOTBALL.

Adopted by Harvard, Yale, Princeton, Pennsylvania, Cornell, and all
other leading universities. Each ball tested and packed, and sealed in
separate box with brass inflator. Price, \$5.00. Spalding's Official
Football Guide for 1897. Edited by WALTER CAMP. Postpaid, 10 cts.

GYMNASIUM SUITS AND EQUIPMENTS.

Catalogue of Fall and Winter Sports free.

WRIGHT & DITSON,
344 Washington Street, - - BOSTON, MASS.

New Tech Pin.

HENRY GUILD & SON

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

433 Washington St., Boston.

SPECIAL NOVELTIES IN NECKWEAR FOR THE HOLIDAYS

A Fine Full Dress Shirt and Studs to match for \$1.00.

Castle Square Men's Outfitter,

465 Tremont St., opp. Compton, Boston, Mass.

CLASS-DAY INVITATIONS,

BLANK BOOKS, FOUNTAIN PENS,

CAN BE FOUND AT THE CO-OPERATIVE STORE,

H. H. CARTER & CO., 5 Somerset St., near Beacon.

Priest's DINING ROOMS.

No. 102 Dartmouth Street.

..PRICES..

Full Ticket, 21 Meals	\$4.00
Breakfast and Dinner, 14 Meals	3.00
Breakfast, 7 Meals	1.50
Mid-day Dinner, 7 Meals	1.20
Dinner, 7 Meals	1.75

HATCH

MAKES HIS

CANDY AND ICE CREAM

FRESH EVERY DAY.

Special Prices to Tech. Boys.

No. 695 TREMONT STREET,

Near West Newton Street.

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.



MISS ALLEN,
Private Lessons in Dancing,
 "THE COPLEY,"
 No. 18 Huntington Avenue.

F. O. CAREY,
TEACHER OF DANCING
 THE FENSMERE,
 Call or send for Circular. 206 Massachusetts Ave.

Bookbinding
 IN EVERY STYLE
ALEX. MOORE, 3 School Street, BOSTON.



Week beginning January 10, 1898.

Castle Square Theatre.—This week the Stock Company will produce a play of Sardou's, "Diplomacy," with their usual skill and success. Every member of the company has won an enviable reputation by the careful and painstaking work that has been done this season. There will be the usual "artists' matinee."

Tremont Theatre.—This is the second and last week but one of Frank Daniels' engagement in

his latest opera, "The Idol's Eye," by Smith and Herbert. Mr. Daniels has a great success in this opera, as it is full of pure fun and bright, sparkling music.

Hollis Street Theatre.—The second week of Mr. John Drew's engagement will be devoted to the presentation of H. V. Esmond's comedy, "One Summer's Day." This play has never before been given in America, but it is now having a very successful run at the Comedy Theatre, London.

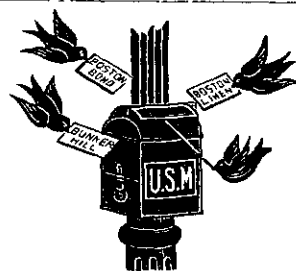
Boston Museum.—The new motion pictures of the world-famous "Passion Play," as given by the peasants of Horitz in Bohemia, are decidedly novel and very interesting. The pictures are accompanied by music and a descriptive lecture by Prof. Earnest Lacy.

Park Theatre.—London's idol, Vesta Tilley, and her company of vaudeville stars from Weber and Field's Music Hall, New York, are the next attraction.

Boston Theatre.—John Philip Sousa's new opera, "The Bride Elect," with a fine cast, grand chorus, and magnificent stage settings, will be the next attraction.

Miss Post's School
 ... FOR ...
INSTRUCTION IN DANCING
 At Pierce Hall, Copley Square, will
 Reopen in October.
PRIVATE LESSONS A SPECIALTY.

Prospectus forwarded upon application.
 Office Hours: 9 till 11, daily.



College Engraving a Specialty.

Everyone uses some sort of writing paper.

Boston Bond, Boston Linen and Bunker Hill are too well known for further mention.

WARD'S

SAMUEL WARD COMPANY,
 Manufacturing Stationers,
 49 Franklin St., Boston.

THE Union Gymnasium

48 BOYLSTON ST. (near Tremont).

PRACTICAL.

Complete
Modern
Apparatus.

Popular
Classes.

Terms,
\$5 and \$8
per Year.



POPULAR.

Extra
Large
Lockers.

Competent
Instructors.

No Extra
Charge
for Instruction

BOSTON YOUNG MEN'S CHRISTIAN UNION.

WM. H. BALDWIN, Pres.

GEORGE PEIRCE, Sec'y

ESTABLISHED 1888.

J. H. AYRES, JR., Men's Furnishing Goods,

PARK SQUARE.

..JUST OUT..

Standing Collar, round corners, 15 c.
2 for 25 c.

Fancy Striped Hose,
25 c. pair.

McGeorge's Scotch Woolen Gloves,
Only 50 c.

HIBBARD & MASON

(INCORPORATED)

Tailors,

MUSIC HALL PLACE,

Telephone 579.

Off WINTER STREET.

BOSTON.

DRESS SUITS, SILK LINED, TO ORDER, \$45

Dress Suits to Let.

STUBENRAUCH'S Petite Luncheon.

Enlarged and Refitted.

SPECIALTIES:

Salads and Sandwiches, Delicious Tea and
Coffee, Vienna Ice Cream and Oysters.

SUPERIOR

Chocolates and Bonbons.

Delicious Ice-Cream Soda, Caramels, Old-
Fashioned Molasses Candy, Vienna and
Home-Made Bread, Cake, and Pastry . . .

20, 22, and 24 Park Square.

NEW ENGLAND AGENTS FOR THE
Allegretti Delicious Chocolate Creams.



The Richmond Straight Cut No. 1 Cigarettes.

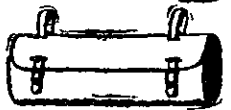
Cigarette Smokers who are willing to pay a little more than the price charged for the ordinary trade cigarettes, will find this brand superior to all others.

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 YOU.**



50 YEARS'
EXPERIENCE

PATENTS

TRADE MARKS
DESIGNS
COPYRIGHTS & C.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communic-
 tions strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the
Scientific American.

A handsomely illustrated weekly. Largest cir-
 culation of any scientific journal. Terms, \$3 a
 year; four months, \$1. Sold by all newsdealers.
MUNN & CO., 361 Broadway, New York
 Branch Office, 625 F St., Washington, D. C.

POND'S EXTRACT is unequalled 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.

EXETER CREAMERY,

Dairy Lunch.

Tea, Coffee, Milk, Sandwiches, Rolls,
 Pastry, etc.

President,
T. E. TALLMADGE, '98.

Vice Pres. and Bus. Mangr.,
G. C. WINSLOW, '99.

M. I. T. CO-OPERATIVE SOCIETY.

Managed by students of M. I. T.

Proceeds devoted to scholarships.

The Co-operative Supply Rooms

Handle a full line of Drawing Materials and Text-Books
 at low prices.

A CO-OPERATIVE SOCIETY MEMBERSHIP TICKET en-
 titles the owner to discounts on goods bought from any
 of the tradesmen in the Society's Handbook.

Established 1843.

Incorporated 1895.

"STUDENTS," ATTENTION!

LARGEST STOCK AND LOWEST PRICES

... ON ...

MATHEMATICAL INSTRUMENTS

AND DRAWING MATERIALS OF ALL KINDS. PICTURE FRAMING A SPECIALTY.

FROST & ADAMS COMPANY,

IMPORTERS AND WHOLESALE DEALERS,

37 CORNHILL, - - - - BOSTON.

"SPECIAL RATES TO COLLEGES."

NEW ILLUSTRATED CATALOGUE FREE.

A STUDENT SHOULD ALWAYS LOOK NEAT

Of course the clothes do not make the man, but you know people often judge a man by his appearance. Now, as *Tailors*, it is our business to take care of the outward appearance, and we try to do it well.

A. H. MATZ & CO.,

(Formerly at 431 Columbus Avenue),

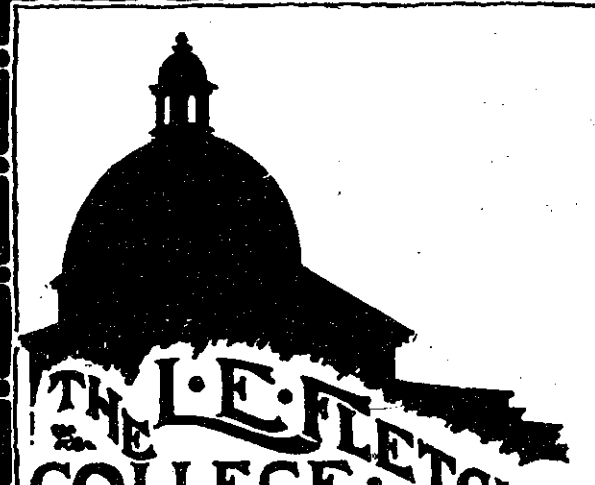
347 Columbus Avenue.

(Near Dartmouth.)

CALL AND SEE US
FOR YOUR
MEN'S FURNISHINGS.
Newest Styles. Lowest Prices.

A. COHEN,
329 Columbus Avenue, near Dartmouth Street.

Agency for Cambridge Laundry.



THE FLETCHER
COLLEGE OUTFITTERS & CO.
158 BOYLSTON ST.
BOSTON MASS.

HATS, CAPS, GLOVES.
Dress, Fancy and Negligee Shirts to order.
Very Best Laundry Work.
Called for and delivered.
—M. I. T. Discount—

ARCHITECTURAL PHOTOGRAPHS, The Largest Collection in America.

All the best Public Buildings, Churches, Private Houses, and Business Blocks in Boston and New York. Richardson's Works of Importance from all over New England. Also a complete line of

Art Photographs for Room Decoration.

STUDENTS WELCOME TO EXAMINE, WHETHER DESIRING TO PURCHASE OR NOT.

SOULE PHOTOGRAPH CO., Publishers,
338 Washington Street, Boston.

Elmer Chickering

The Leading Photographer.

SPECIAL RATES TO STUDENTS.

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."