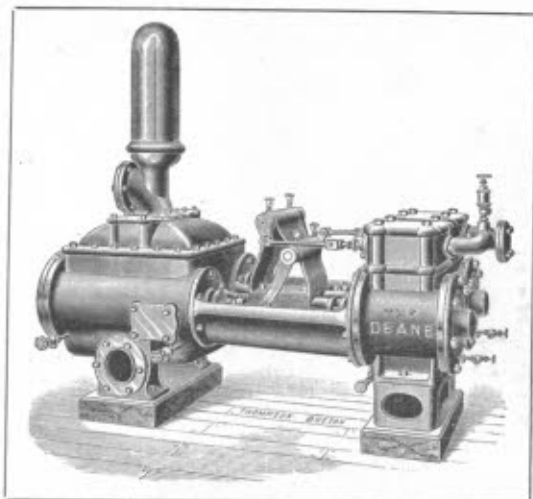


# TECHNIQUE



1889

\* \* THE DEANE \* \*  
OF HOLYOKE  
STEAM PUMPS.



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Are recommended by the Leading Insurance Companies.

THE DEANE STEAM PUMP CO.  
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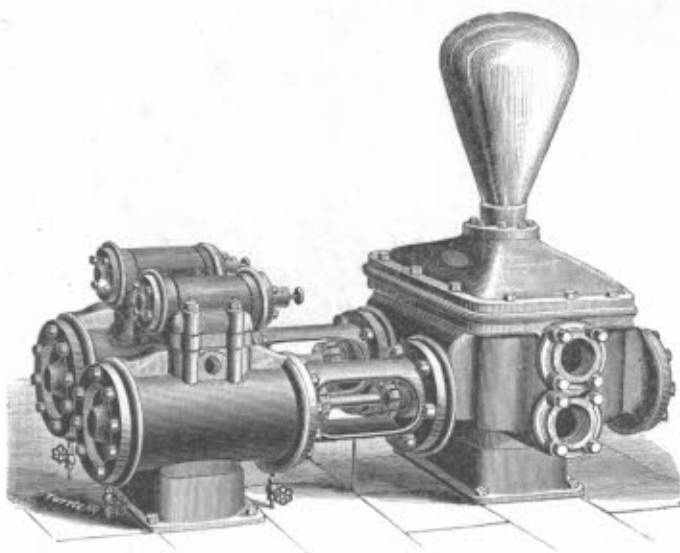
*A is for Adams, a chemical genius,*

---

# HALL DUPLEX STEAM PUMP,

FOR ALL DUTIES.

Simple, Durable and Efficient.



Send for 1890 Catalogue.

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NEW YORK.

PITTSBURGH.

CHICAGO.

ST. LOUIS.

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*For further particulars, vide Fresenius.*

*B—Major Blanchard, for reasons official,*

---

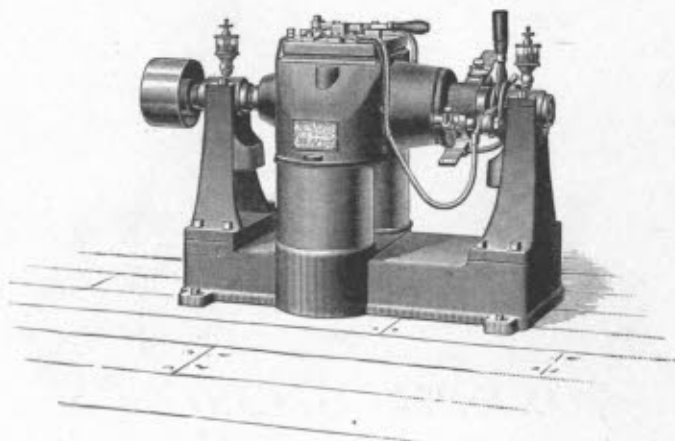
# THE THOMSON-HOUSTON ELECTRIC CO.

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### Arc and Incandescent Lighting



— AND —

### ELECTRICAL TRANSMISSION OF POWER

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For Estimates and Circulars address

## The Thomson-Houston Electric Co.

620 Atlantic Avenue,  
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*Reserves all the rights to the second initial.*



*C is for Cogswell, the only C. P.,*

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FRED W. DORR & CO.

Tailors,

NO. 9 STATE STREET, BOSTON, MASS.

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We beg to call your attention to our new and well-assorted stock of WOOLEN GOODS, for Fall and Winter wear, comprising all the Latest Novelties in WORSTEDS, FANCY SUITINGS, OVERCOATINGS, and TROUSERINGS. An inspection is cordially invited. We guarantee Fit, Style, and First-class Workmanship.

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THE MOST PERFECT OF PENS.

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(The celebrated Crowquill), 290 and 291.

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Point, 849.

FOR GENERAL WRITING, Nos. 404, 332, 390, and  
604.

JOSEPH GILLOTT & SONS,

91 John Street, N. Y.

HENRY HOE, Sole Agent.

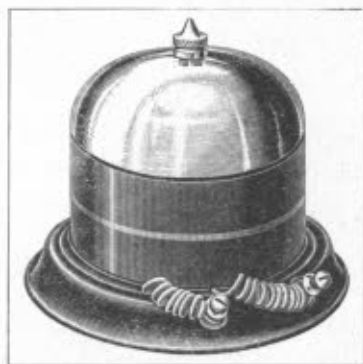
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*Inclined on occasions to raising the D.*

*D is for Dart, but Billy's more handy;*

## ELECTRICAL GOODS.

INSULATED WIRE.

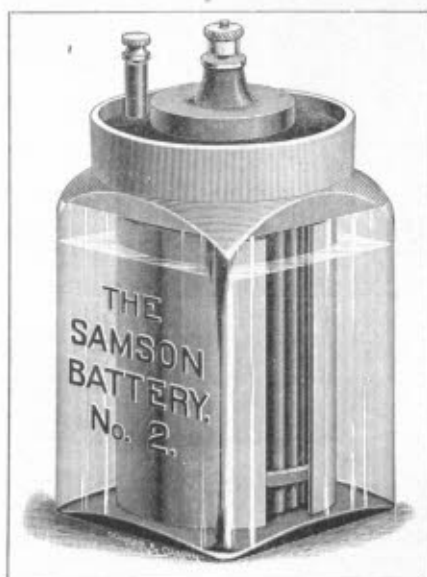


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A. J. WILKINSON & CO.

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DOOR PULLS, BELLS, RATCHET  
BURNERS, PUSH BUTTONS,  
ETC., ETC., ETC.

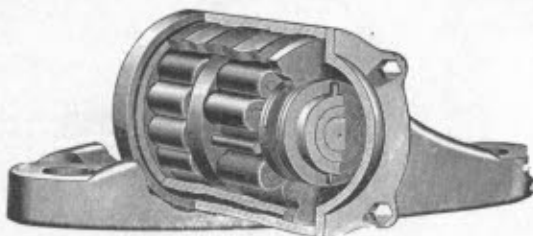
*"In his best Sunday clothes" he is quite a "Jim Dandy."*

*E is for England; the man you have seen,*

## TRIPP MANUFACTURING CO.

34 India Wharf, BOSTON, MASS.

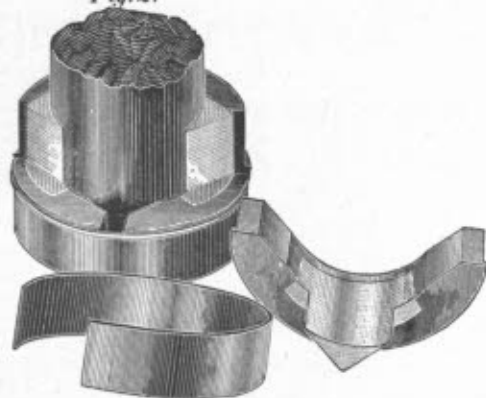
### THE TRIPP ANTI-FRICTION JOURNAL BEARING



A Bearing adapted for Electric, Cable, Horse or Railway Coaches, also for Electric Dynamos and all classes of Shafting, and we have demonstrated a saving of 30 to 70 per cent of power over ordinary bearings.

### TRIPP'S METALLIC PACKING,

*Fig. 2.*



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GREEN & BOULDING, London, England.  
H. C. RUSSELL & CO., Montreal, Canada.

*But never his shadow, because he's too lean.*

*F is for Favor, an expert on jags,*



## Thompson Improved Indicator.

MORE THAN 5,000 IN USE.

Read the following Testimonials from Eminent Engineers who have used this Indicator:—

CINCINNATI, O., March 8, 1889.

AMERICAN STEAM GAUGE COMPANY, BOSTON:

*Gentlemen,*—I have used Thompson Steam Engine Indicators for fifteen years; in fact, ever since they were first introduced, and have at all times, and under all conditions of engine service, found them entirely reliable. In all my experience I have never had occasion to

complain of the manner in which they performed, and if I were buying new Indicators to-day I should buy the Thompson.

I do not know that I can express my regard for these invaluable instruments in any stronger language.

Very respectfully,

JOHN W. HILL, C. E.

CALUMET AND HECLA MINING COMPANY,  
OFFICE OF THE CONSULTING ENGINEER,  
CAMBRIDGEPORT, MASS., March 6, 1889.

AMERICAN STEAM GAUGE COMPANY,  
36 Chardon Street, Boston:

*Gentlemen,*—I have to say that after quite an extended use of the Thompson Indicator, I am persuaded that it is a most excellent instrument, and that my confidence in the same is proven by the orders from time to time sent your company.

Yours truly,

E. D. LEAVITT, JR.,  
CONG. ENG'R.

SIBLEY COLLEGE, CORNELL UNIVERSITY,  
ITHACA, N. Y., March 12, 1889.

*Gentlemen,*—It gives me great pleasure to say that the instruments sent us have proved to be of most excellent quality, and, so far as our work has given opportunity to judge, of great accuracy. We have used them on all kinds of work, and at speeds of rotation up to three hundred, and have found them capable of doing admirably. The finish is excellent, and the sizes and fits all that could be asked. They have been very useful, both in class work and in making engine trials, and eminently satisfactory in all respects. We have had no difficulties with them except such as have come from inexperienced hands. When used for instruction an occasional accident is to be expected. They have withstood such injuries quite as well as we ought to expect, and have done more work and better work, even in such hands, than I had supposed possible.

Very respectfully yours,

R. H. THURSTON,  
DIRECTOR.

TO AMERICAN STEAM GAUGE COMPANY.

EDW. P. ALLIS & CO.,  
RELIANCE WORKS,  
MILWAUKEE, WIS., March 14, 1889.

AMERICAN STEAM GAUGE COMPANY,  
Boston, Mass.

*Gentlemen,*—I have used all the prominent makes of Indicators, but very much prefer the Thompson, and believe it has more good points and less faults than any other instrument made. The easy changing of springs, good leading pulley for the cord, general convenience in handling, and last, but certainly not least, its ability to stand abuse, are some of the features that commend it to the practical engineer.

Yours truly,

IRVING H. REYNOLDS.

MANUFACTURED SOLELY BY

**AMERICAN STEAM GAUGE CO.**

36 CHARDON STREET, BOSTON, MASS.

*And readily known by the style of his bags.*



*G is for Greer, from the wild woolly West.*

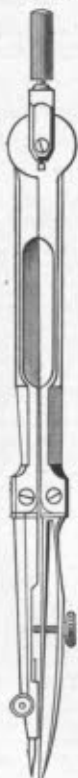
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*He bluffs the instructors as well as the best.*

*H is for Hammond, who hails from Detroit,*

# BOSTON YOUNG MEN'S CHRISTIAN UNION

No. 18 Boylston Street.

## THE UNION GYMNASIUM

Is one of the Largest and Most Completely Equipped  
Gymnasiums in the Country.



ITS length is 136 feet, height 22 feet, and has an area\* of 6,200 feet, exclusive of Dressing and Bath Rooms (in all over 10,000 feet).

The room is well lighted on every side, thoroughly ventilated, has indirect steam heat, and the exercising floor is above the street level.

The incandescent system of electric lighting is used throughout the Gymnasium.

The Dressing-Rooms are spacious, and contain over 1,200 lockers.

The Bathing Accommodations are of the best.

Rubber Running Track on the main floor with a course of 28 laps to a mile, unobstructed by apparatus, and open to runners at all times during Gymnasium Hours.

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INCLUDING THE UNION MEMBERSHIP (ONE DOLLAR), AND ENTITLING  
TO ALL ITS PRIVILEGES.

For One Year, entitling to use of Gymnasium after 7.00 P. M., and on Holidays for such time as it may be open	\$5.00
For One Year, entitling to use of Gymnasium at all times when open	8.00
Keys, to be refunded on return of same	.50

CARDS WITH FULL PARTICULARS MAY BE HAD AT THE ROOMS.  
WILL BE MAILED IF REQUESTED.

W. B. CLARKE, Secretary. WM. H. BALDWIN, President.

*He's somewhat too heavy a man for the poet.*

*I is the Institute, common to all,*

PARIS UNIVERSAL EXPOSITION, 1889,  
**GOLD MEDAL**

(HIGHEST AWARD)

For STEAM ENGINE INDICATORS, POP SAFETY VALVES, CHIME WHISTLES  
AND SIGHT-FEED LUBRICATORS.

**THE CROSBY STEAM ENGINE INDICATOR**

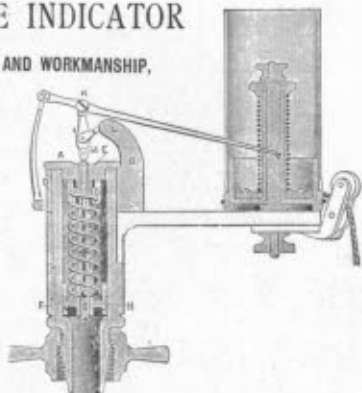
STANDS UNRIVALLED FOR PERFECTION OF DESIGN AND WORKMANSHIP,

AND FOR THE

Remarkable Accuracy of its Diagrams.

*It is Highly Endorsed by Eminent American and  
Foreign Engineers.*

Notwithstanding that the CROSBY INDICATOR is the latest in the history of Indicators, it ranks as the best, not only in the United States, but also in Great Britain, France, Italy, Norway, Sweden, Denmark, Germany, and Russia, and by the admiralities of these several countries has been officially adopted. We may be pardoned for adding, also, that the CROSBY INDICATOR is the only Indicator described, illustrated, and endorsed by the last edition of the scholarly "Encyclopædia Britannica." — *From Practical Electricity.*



In a paper read before the "Institution of Civil Engineers," of London, March, 1888, on Non-Condensing Steam Engine trials, by Mr. P. W. Williams, occurs the following reference to the CROSBY STEAM ENGINE INDICATOR:—

"The Indicator diagram, of which three sets were taken each hour, are therefore practically identical.

"They were taken, in all cases, by the CROSBY INDICATOR, and it is not too much to say that without that Indicator such trials would have been impossible.

"It would be difficult to speak too highly of the working of these beautiful instruments, which produce perfectly clear and measurable diagrams at the speed (400 revolutions per minute) at which the majority of these tests have been made."



THIS COMPANY ALSO MAKE

**The Crosby Improved Steam Pressure Gage,**  
PATENT GAGE-TESTING APPARATUS,

And many other Specialties for the Measurement and Control of  
Steam, Water, and Other Fluids.

**CROSBY STEAM GAGE & VALVE CO.,**  
66 JOHN ST., NEW YORK, 75 QUEEN VICTORIA ST., LONDON, ENG.  
Office and Salesroom . . . 93 OLIVER STREET, BOSTON, MASS.

*In which Ninety-one has at present the call.*

*J is for Jacobs, who sells us supplies.*



LEONARD & ELLIS,

SOLE MANUFACTURERS OF

Valvoline Lubricating Oils.

WILLIAM JAMES GOULDING, MANAGER.

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*VALVOLINE LUBRICATING OILS are manufactured in the following grades, each grade having several qualities, varying in price, according to the crude oil used, and the extent to which they have been refined and filtered.*

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For use in the Valves and Cylinders of Steam Engines (Stationary, Locomotive, and Marine), and for Pumping Engines for Water Works, are specially commended.

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In various grades, suitable for use on all kinds of Machinery and Shafting.

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Entirely free from acids, and as nearly stainless as petroleum products can be made.

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White and Amber-colored, in heavy and light grades; will not gum or corrode.

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These Oils are perfect lubricants; thoroughly clean in use.

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A leading firm manufacturing Watches and Clocks pronounce it the best.

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Warranted superior to animal and Castor Oils. This Oil is sold in pint, quart or gallon cans by the dozen, or at retail in great or small quantities. It has long been highly valued for its wearing quality, and for harnesses is superior to Neatsfoot. Being a pure product of petroleum, it is largely used as an external remedy for horses and other animals, and is an *invaluable remedy*.

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OUR OILS ARE WARRANTED AND SATISFACTION GUARANTEED.

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*The question is: Where will he go when he dies?*



*K is for Kaufmann, a Western invader,*

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PHOTO-ENGRAVING IN ALL ITS BRANCHES.



"HALF-TONE" PLATE

MADE DIRECT FROM A PHOTOGRAPH

BY THE

BOSTON PHOTOGRAVURE CO.

27 Boylston Street.

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*He caught a Co-ed, but just now he's mislaid her.*

*Lawrence is L, and he firmly declines*

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56 BROMFIELD STREET, BOSTON.**

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Platinum, Bismuth, Antimony, Phosphor Bronze, Aluminum Bronze,  
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**DRAWING INSTRUMENTS IN SETS AND SINGLY.**

---

*The use of his name in these frivolous lines.*

*M is for Moore; the three Freds of that name,*

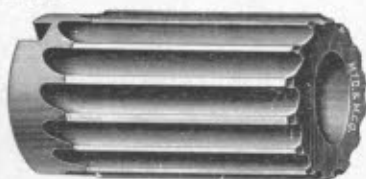
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Solid and Shell Reamers.



Milling Cutters.

Drill-Grinding Machines.

Tap Wrenches.



Standard  
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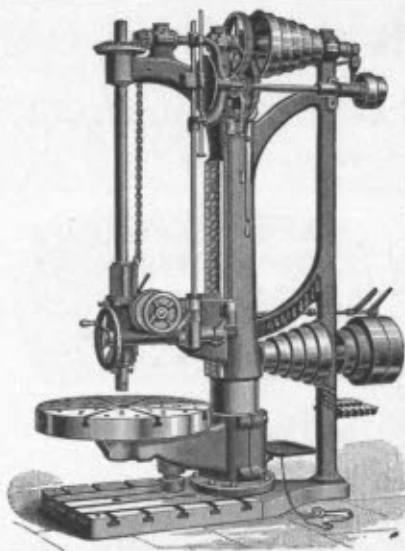
Counter Sinks.

Angular Cutters.

## SPECIAL TOOLS IN STEEL.

*As Harry can tell you, are "No, not the same."*

*N is for Nickerson ; most he enjoys*



**EBERHARDT'S  
Patent New Drill Press.**

Sizes, 25", 30", 33", 36", 37", and 42".

Embodies an  
entirely new  
principle in  
the feeding  
motion of  
Drill  
Presses.

Saves more  
than 20 per  
cent over all  
former con-  
structions.



**Eberhardt's Pat. Auto. Gear Cutter. Eberhardt's Pat. Auto. Rack Cutter.**

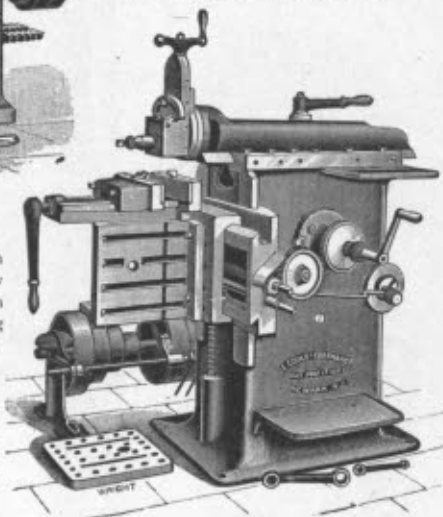
Sizes, 18", 25", 36", 50", 60", and 84".

ADOPTED BY LEADING TOOL BUILDERS OF THE WORLD.

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**FIRST-CLASS  
MACHINE TOOLS**

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NEWARK, N. J.**

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Sizes, 12", 16", 24", 26", and 30".

This Shaper is the most con-  
venient tool in use for general shop-  
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This Gear Cutter cuts spur, bevel,  
and worm gears, without attention,  
after the machine has been set.

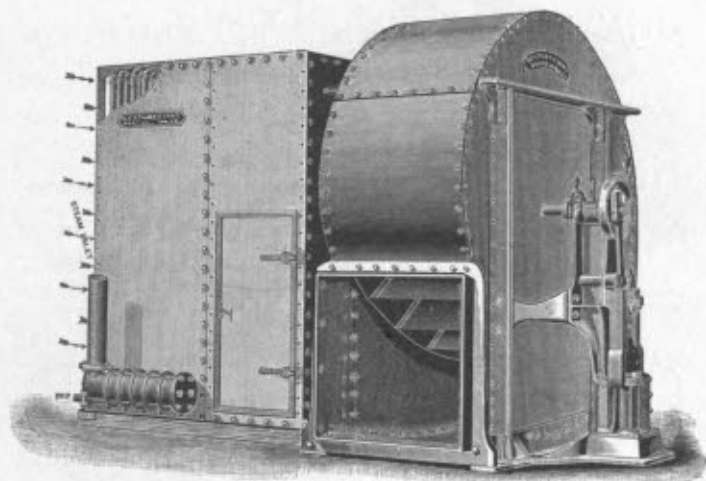
*Himself, when he's busy in making a noise.*



*O is for Oxford; we give him a line*

---

B. F. STURTEVANT'S  
Steam Hot-Blast Apparatus  
— FOR —  
HEATING AND VENTILATING.



APPLICABLE TO BUILDINGS OF ALL CLASSES.

STURTEVANT'S CELEBRATED  
Steel Pressure Blowers, Exhaust Fans  
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Branches, — 91 Liberty Street, New York, 31 North Canal Street, Chicago.

Send for Treatise on Ventilation and Heating.

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*Because he did wonders for Ninety-one's } nine.*

*P is for Palmer, in what class is he?*

---

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PHILADELPHIA,

MAKERS OF

Engineering and Surveying Instruments,  
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SOLE AGENTS IN U. S. A. FOR

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CELEBRATED HATS.

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Correct.



Quality

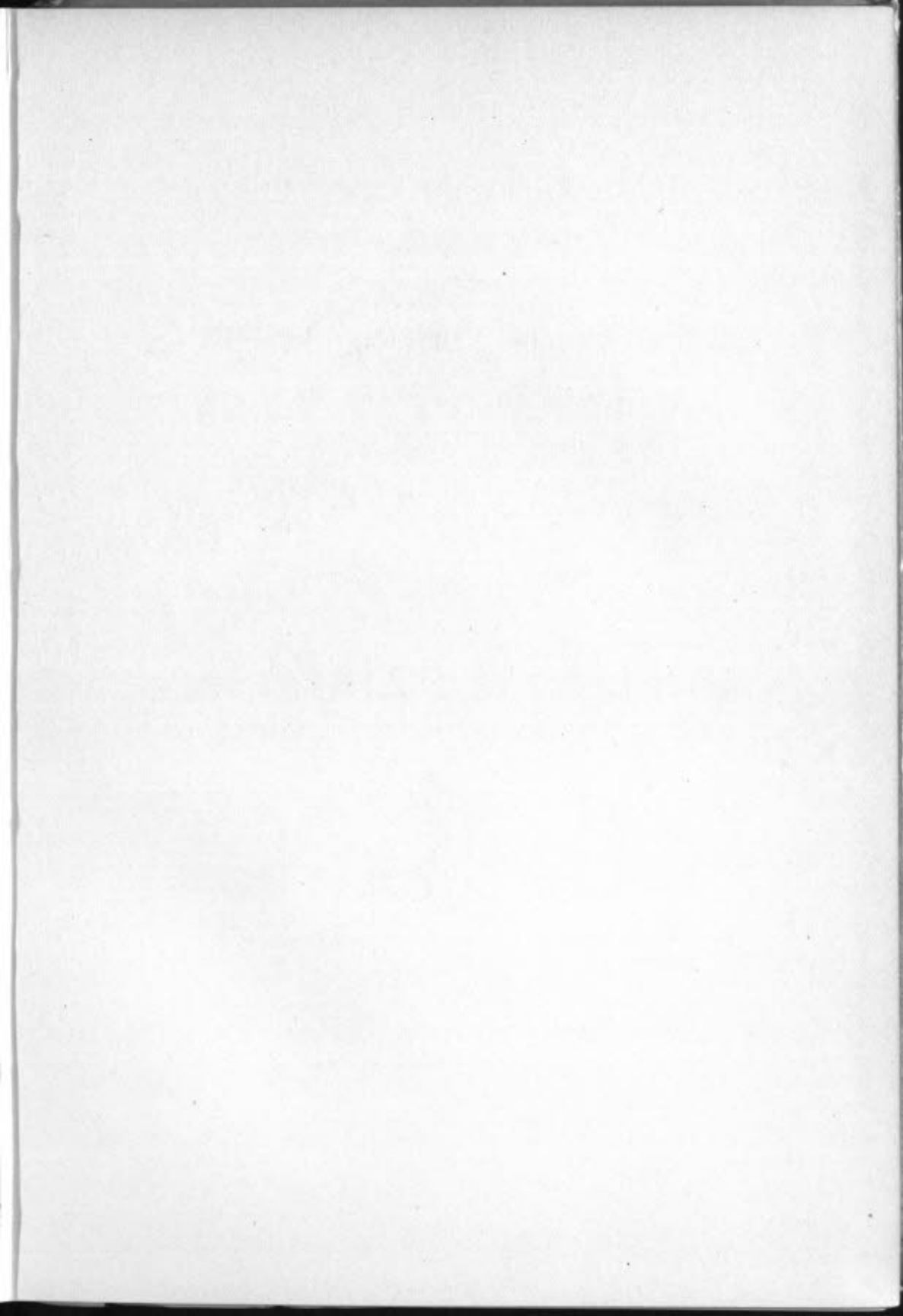
Unequalled.

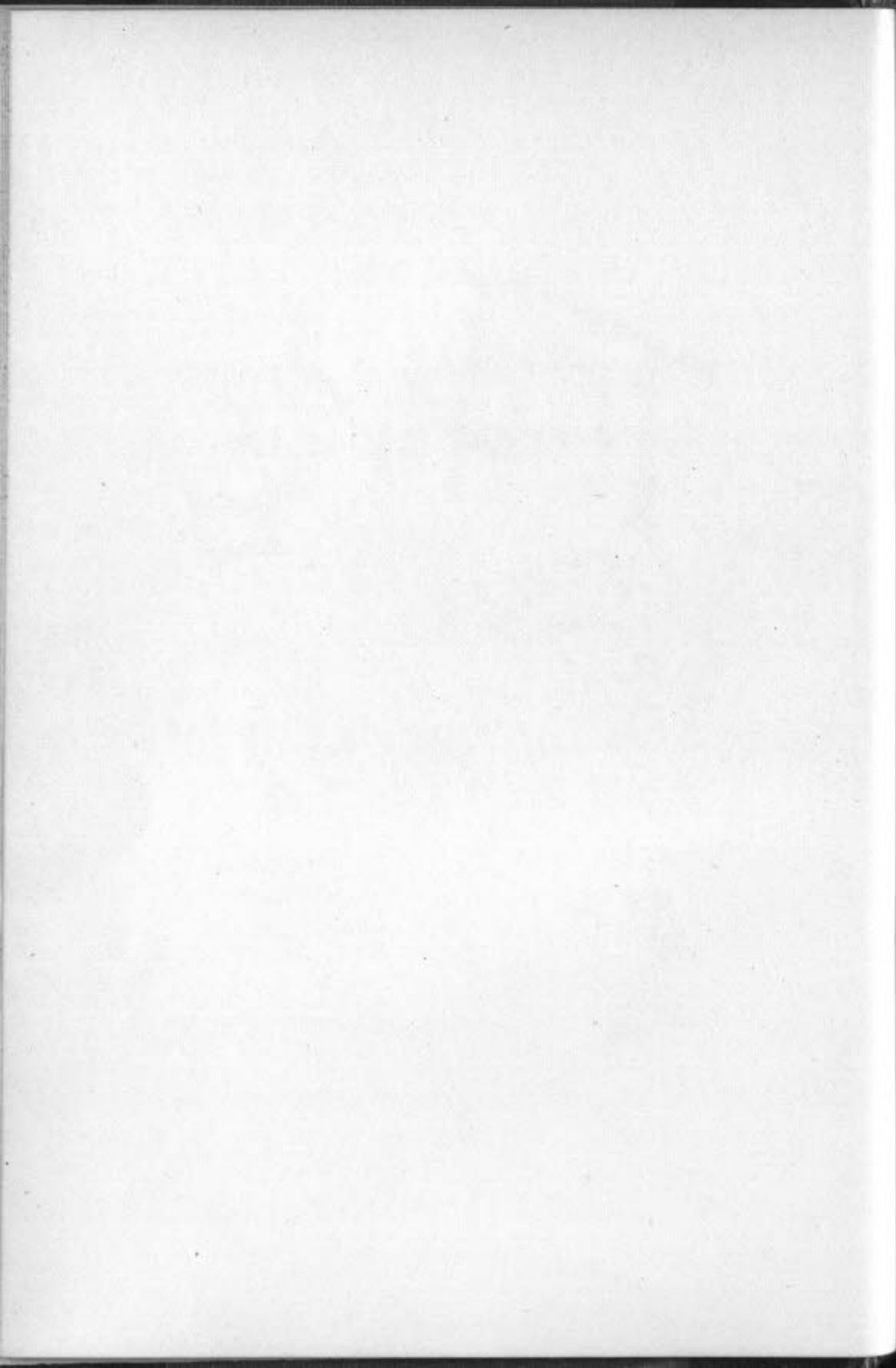
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LONDON HATS.

381 Washington, opp. Franklin St.,  
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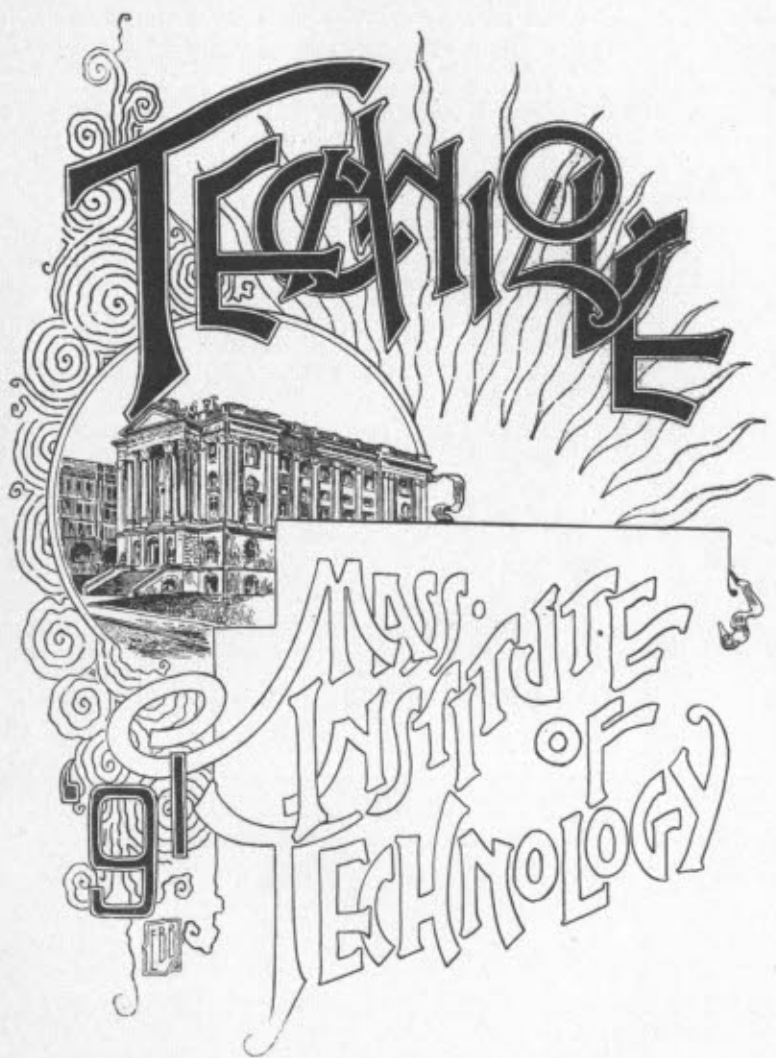
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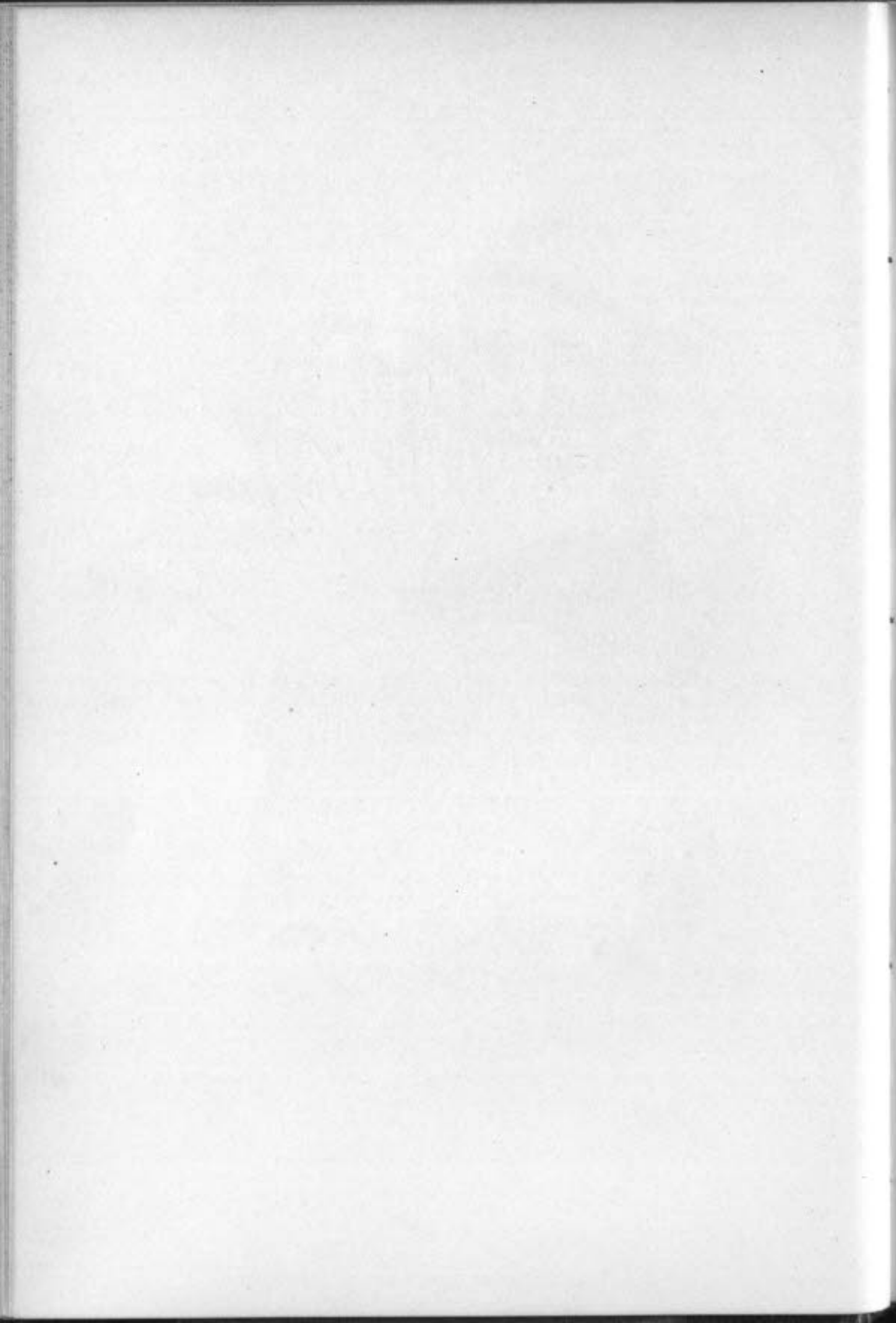
*Ninety? Ninety-one? Ninety-two? Ninety-three?*

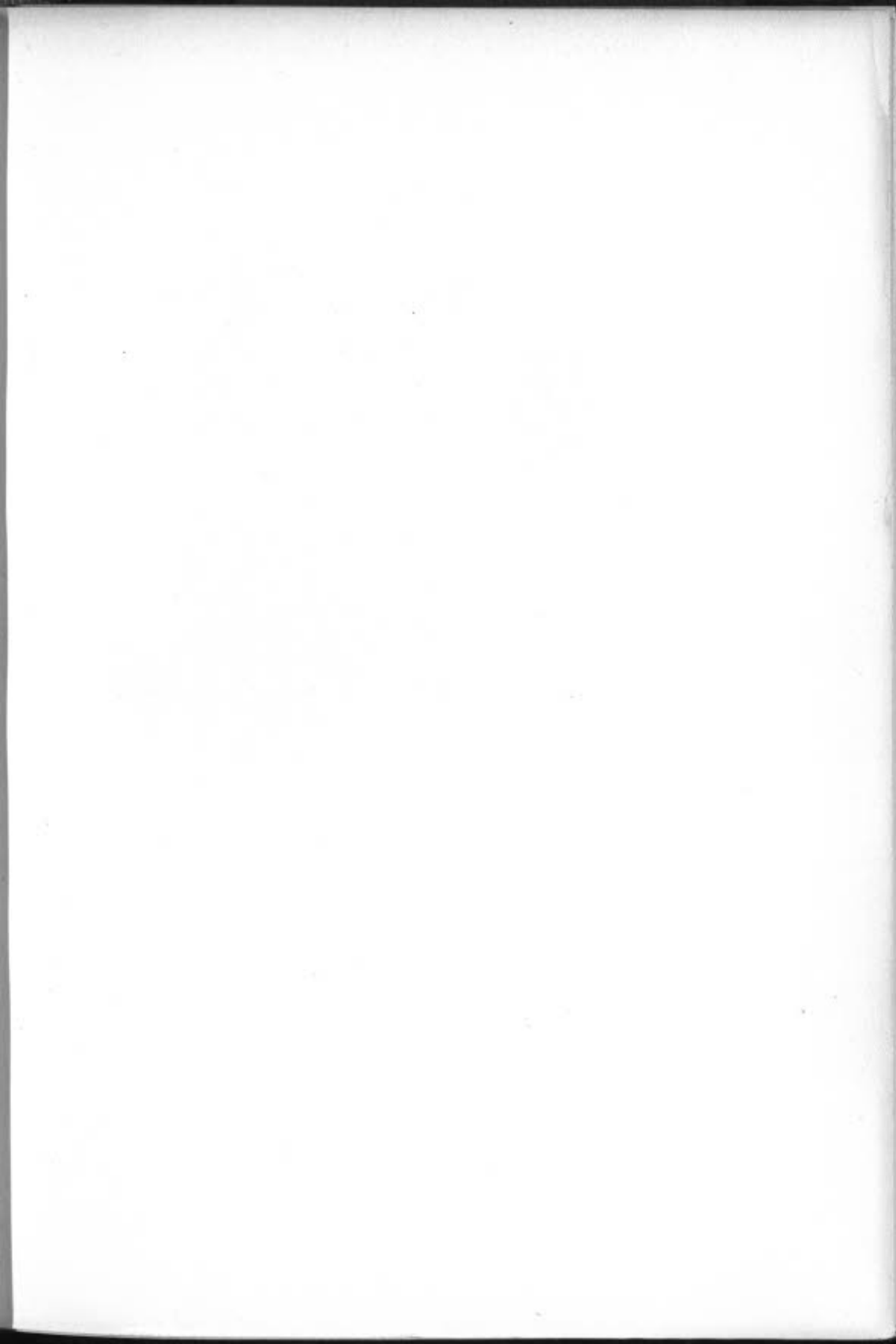


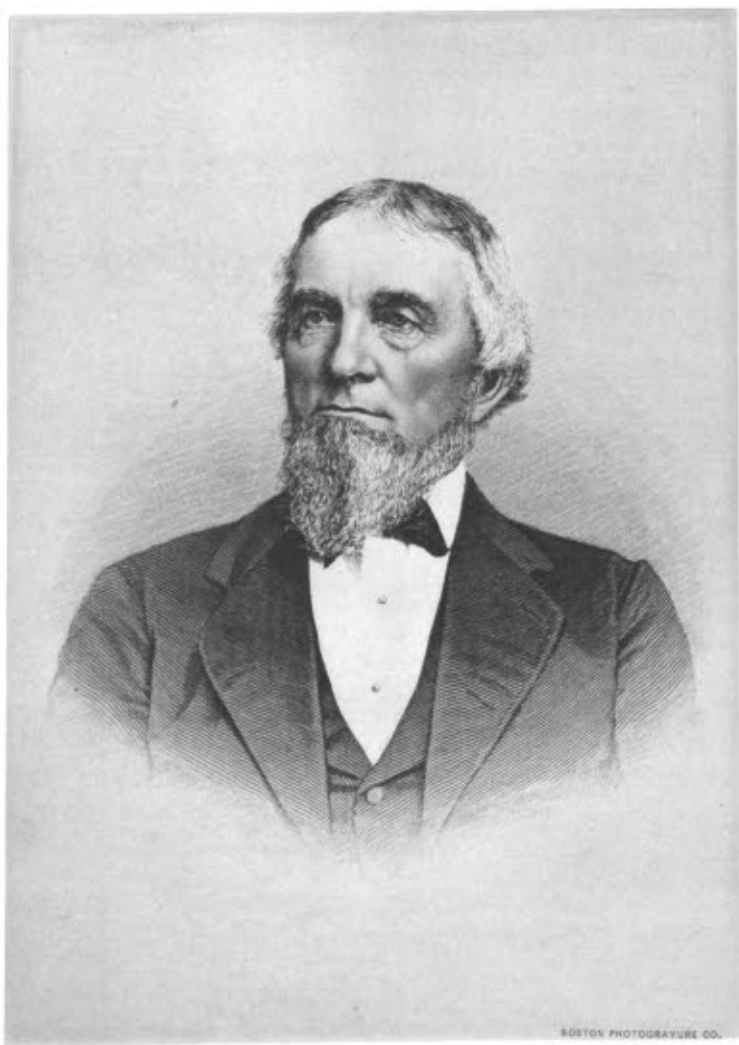












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*Dedication.*

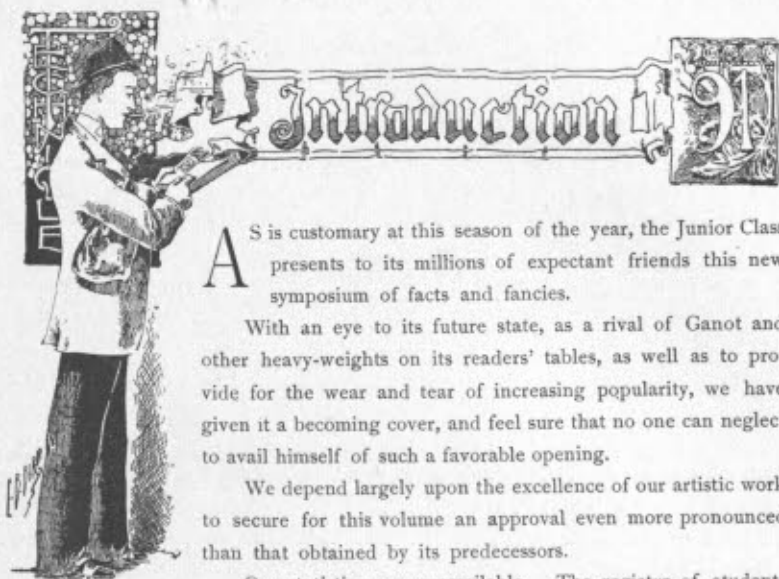
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TO THE  
SPECIALS,  
THE EDITORS OF TECHNIQUE  
UNCONDITIONALLY  
DEDICATE THIS VOLUME.





*Count that day lost, whose low descending sun  
Gees at thy hand no Technique, Ninety-one.*



AS is customary at this season of the year, the Junior Class presents to its millions of expectant friends this new symposium of facts and fancies.

With an eye to its future state, as a rival of Ganot and other heavy-weights on its readers' tables, as well as to provide for the wear and tear of increasing popularity, we have given it a becoming cover, and feel sure that no one can neglect to avail himself of such a favorable opening.

We depend largely upon the excellence of our artistic work to secure for this volume an approval even more pronounced than that obtained by its predecessors.

Our statistics are unassailable. The register of students embodies the results of a series of experiments conducted by the Secretary during the last four years to determine the status of the present members of the Institute. The lists of social organizations are as full as the habits of their members render possible. We have given special attention to athletics, and have not yet gone out of training.

This book is nothing if not true, and in our desire to do justice to all, we have endeavored to let no guilty man escape. With its cuts of, and cuts at, individuals, we can truthfully say that in its pages every one connected with the Institute is mentioned, at least by name.

With malice toward none, and hoping that the little tin savings bank of the financial manager may receive charity from all, we hereby announce our readiness to exchange for an honest dollar, two dimes, and a nickel, a copy of NINETY-ONE'S TECHNIQUE.

## Calendar.

FOR 1889-90.

School year began . . . . .	Monday, Sept. 30, 1889.
Second term will begin . . . . .	Tuesday, Feb. 4, 1890.
<b>TECHNIQUE</b> issued . . . . .	<b>Wednesday, Feb. 5, 1890.</b>
Degrees conferred . . . . .	Tuesday, June 3, 1890.
First Entrance Examinations . . . . .	{ Thursday, June 5, 1890. Friday, June 6, 1890.
Second Entrance Examinations . . . . .	{ Tuesday, Sept. 23, 1890. Wednesday, Sept. 24, 1890.
Examinations for Advanced Standing . . . . .	Thursday, Sept. 25, 1890.
School year of 1890-91 will begin . . . . .	Monday, Sept. 29, 1890.

# REGISTER.

of the

\* OFFICERS \* AND \* STUDENTS \*

of the

Massachusetts \* INSTITUTE \*

\* OF \* TECHNOLOGY

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• FOR • THE • YEAR •

\* 1889-90 \*

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WILLIAM C. STIMSON . . . . .	<i>Assistant in Forging.</i>

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### LECTURERS FOR THE CURRENT YEAR.

GEORGE W. BLODGETT, S. B. . . . .	<i>On Applications of Electricity in Railway Working.</i>
HENRY M. HOWE, A. M., S. B. . . . .	<i>On Metallurgy.</i>
ROSS TURNER . . . . .	<i>On Water Color and Sketching.</i>
CHARLES W. HINMAN, S. B. . . . .	<i>On the Manufacture of Illuminating Gas.</i>
WALTER S. ALLEN, S. B. . . . .	<i>On the Manufacture of Fertilizers.</i>
DAVID A. GREGG . . . . .	<i>On Pen and Ink Drawing.</i>
ANTHONY C. WHITE, S. B. . . . .	<i>On the Distribution of Electricity for Commercial Purposes.</i>
EDWARD BLAKE, Ph. B. . . . .	<i>On the Construction and Application of Electrometers.</i>
EDWIN O. JORDAN, S. B. . . . .	<i>On Biology.</i>



SCHOOL OF INDUSTRIAL SCIENCE.



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*From the height that few attain,  
Looks the Senior o'er the plain.  
Far before him, and below,  
Lies the world's inviting show.  
To its wealth, a master key,  
Tech. presents him his degree.*

## CLASS OF '90.

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Colors, Blue and Silver Gray.

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### History.

NINETY'S proud name goes down to posterity engraved first on the list of winners of the big class-cup. Her heavy-weight and feather-weight boxers continue to hold, with gentle insistence, their supremacy among devotees of the manly art. We have cheerfully taught the lower classes whatever of athletic skill they have been capable of acquiring, and we expect also, with characteristic generosity, to leave to them most of our athletes to encourage their future efforts. We have also broken more records than any other class ever in the Institute.

Perhaps rather more apart from our student life than of it, are those occasional gatherings when the tired brain relapses its tension, and the "heart beats high and warm with banquet song, and dance, and wine." Ninety's class suppers are in every sense a howling success, and we have as good a set of after-dinner speakers as ever gathered to do justice to Mrs. Young's good cooking, and awake strange echoes in her big hotel. Our class society does not sport a bulletin board in Rogers corridor, with a record of perpetual postponements. It prefers enjoyment to advertising, and its record of suppers and theatre parties is one of merry jollity and thorough good-fellowship.

From sea-shore and mountain, from desperate flirtations with coy transits at Schoharie, and milder coquetry with the seductive monkey-wrench in many a machine shop and factory, with the melodious cadence of the millionaire porter still ringing in our ears, "Boston! Don't forget your overshoes and umbrellas!" we have returned for the last time to the Back Bay and its boarding-houses, dead in earnest for our winter's work. From Course I., which is starting a sewer navigation company, to Course IX., with a still more odorous tariff discussion, we are toiling away

with head and heart and hand. We have found out what "I and the United States government are doing in the way of column tests," who is "papa," and many unique applications of arithmetic to steam engineering. In the assaying laboratory some of us have enjoyed a foretaste of the life to come.

Most of us are thinking about theses. Some are already in progress. A few of inquiring minds have asked one question too many. One man of Course II. is said to be investigating the "compressive action of couples." His home in a neighboring city has been fitted up with an extensive system of laboratories, where varied and extremely beautiful and interesting experiments are now being made, both under repeated stresses and time tests. He hopes after graduation to pursue his inquiries still further.

We found the Senior ball in its decadence. We leave behind us the Senior farewell banquet in the fulness of glory. We have assisted in the annihilation of the School of Mechanical Arts. We found cramped accommodations and crowded apartments. We leave improved facilities and ample room for all. As succeeding classes shall climb the winding stairs that lead toward Heaven and the new drawing-rooms in the New Building, which our architects planned and which our labors first consecrated, they will have good cause to remember the Class of '90.

Do you want any more history? Happen in to our class-day exercises one sunny afternoon of the early June, and list to the dulcet tones of our historian and statistician and our prophet of history yet to be. There will be music there, rare wit, and matchless brilliancy. And there will be a deep undercurrent of sorrow at the parting that may not longer be delayed. Though for the last time we shall be gathered in full numbers under the old colors, the words of the song will still ring true:—

"Ah! 't will be, some distant day,  
Pleasant to  
Twine once more with silver gray  
Ribbons blue,  
As we meet, a festive throng,  
Round the board with speech and song,  
College friendship, true and strong,  
To renew."



## SONG.

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WRITTEN TO BE SUNG AT A SENIOR SUPPER.

---

HERE, one and all united,  
Before the ways divide,  
We 'll travel o'er the years again,  
With memory for our guide.  
The fortune and the fame, boys,  
We 'll win them, first or last;  
To-night, then, let the future go,  
And celebrate the past.

The days of earnest labor  
In which our lot was cast,  
Like ages in the passing seemed,  
Like moments in the past.  
We found their compensation  
In nights of hearty cheer,  
Wherever comrades gathered then,  
As we are gathered here.

Our early numbers lessened  
Along the rugged course;  
But closer links of comradeship  
Have added to its force.  
The circle, in contracting,  
Each year more firm is bound,  
And strengthens, like the friendly grasp  
Of those within its round.

Then leave the shining prospect  
Of what is yet in store,  
And glorify together, boys,  
The happy days of yore.  
We tried and true companions  
No morrow can allure;  
We give to-night, fraternally,  
To friendship strong and sure.

## TECHNIQUE.

### Senior Class.

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ANDREW W. WOODMAN . . . . .	Chelsea . . . . .	Chelsea.

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*How can reason reconcile  
Science and a lady's smile?  
How can Tech. men hope to find  
Time to love and time to grin?  
Ask the Junior, for he knows  
Life and love, beneath the rose.*

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### The New Pilgrim's Progress.



AS I wandered through the wilderness of this world I fell into a deep sleep, and dreamed, and behold, I saw in my dream a great company of young men clad in fine raiment, with cigarettes in their mouths, standing on the border of a deep and swift river called Exam, which flows into the great gulf Flunk. And I perceived that they held Ponies in their hands and that their cuffs were inscribed with Cribbs, yet none durst cross over until compelled by the entreaties and threats of a goodly person called The Old Man. And I looked again, and saw that part of the company had gained the farther shore, but many were swept away and had disappeared in the Gulf.

Now, those that remained came to a Gate, over which was written the word "Secretary," where stood a grave man and a dignified, called James, whose surname was Barbarossa, and he asked of them what they would. They answered, "We are the company of '91, from the Land of the Philistines, and go to the City of Bachelors, and beg of you permission to enter by this way."

And in my dream I saw that they had entered on the way which led through a wild and dangerous country, and that the company travelled together through a pestilential bog, from which rose lurid flames, noxious gases, and horrible smells, because of which many became faint and would fain have returned.

And I saw men of the City of Bachelors, who had been sent by Francis, the king of the country, to aid pilgrims by the way, but had fallen from their high estate and become demons to make the way more dark and difficult, even to lay gins and snares for the pilgrims' feet.

## TECHNIQUE.

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Again I saw the company with great difficulty cross an exceeding high mountain by a long and tedious way, and much harassed by the inhabitants of the country, who were of the tribe of Linus, so that, although provided with compasses, many did lose their way, and were projected to the horizontal plane of the outer world.

And I perceived that all of the journey was not hard, but that sometimes they came to pleasant bowers and had royal feastings and games, at which they, sad to say, were often worsted, though of good spirit and valiant.

Then I saw that they had reached the end of the first stage of their journey, and had come to a great and deep valley, in which rushed another and more violent torrent than such as they had passed, into which many entered with great weeping and lamentation, for they were not prepared; but others obtained charts of those who had crossed in former times, and did faithfully search until they found where the stream was shallow and of little strength, and crossed in safety.

Now, they that remained of the company rested for the space of four months, clad in flannels of many hues, and cured them of the many and grievous wounds which they had.

Again I dreamed, and saw that the company had returned to address themselves to the journey; but they took up divers ways, each supposing his own to be the easiest, — in which belief he was sorely mistaken.

And they toiled up the steepes of Higher Mathematics, until their eyes were blinded by the fogs of Analytic Forms and Differential Methods, so that many fell into the Pit. Then the company had need to pass the Valley of the Shadow of Physics, for the way to the City of Bachelors lay through the midst of it. Now, this Valley is a dangerous place: for it is as dark as pitch, a land of problems and demonstrations, and the way narrow, for the Gulf Flunk approaches nigh to it, and it is needful that the pilgrim should not sleep, but fix his eyes steadfastly on the Cross which goes before him. And I saw that at the end of the Valley lay blood, and bones, and mangled bodies, even of the pilgrims who had gone this way, and I marvelled greatly as to the reason, when I saw, hidden near the path, two grisly giants, called Optics and Electricity, by whose cruelty these were slain.

But the company passed by this place with little difficulty, as the giants were wearied by their slaughter of '90.

A third time I dreamed, and perceived that the pilgrims were grown older and more wise, even fuzzy as to their faces; and I saw that divers of them laid their heads together and said, the one to the other, "Truly, this is the season in which we must publish *TECHNIQUE*, and verily it shall lay out all others; for, though it be a grievous job, yet he who hath a will Hath-a-way, and Moore-over, our Bird hath Donn good work for us"; whereupon there were fierce lightnings and dire earthquakes, in which perished miserably the speakers of these words.

Now, as they journeyed, behold the company passed through the Wilderness of Heat, a country whose air naturally tends to make one drowsy, where some slept and were lost thereby.

At length, leaving them to their labors, I turned me in my dream to the Mount of Records, from which could be seen the fair City of Bachelors, and looking into the Land of the Future, did behold them, in the Fourth Stage of their journey, ascend the last steep slope of the Technology Mountain, receive the Roll of Testimony at the hands of King Francis, before the gates, and pass, with great glory and dignity, into the City.

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*Deeper sea and higher wave  
Has the Sophomore yet to brave.  
Others may be swept away,  
Ninety-two has come to stay.  
While he finds at his command,  
Needful rocks and lots of sand.*

## CLASS OF '92.

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Colors, Black and Crimson.

YELL: RACKETY WHACK, GO WHACK, GO WHACK,  
RACKETY WHACK, GO WHACK, GO WHOO!  
RACKETY WHACK, GO WHACK, GO WHACK,  
TECHNOLOGY, NINETY-TWO!

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### History.



SINCE our first appearance in *TECHNIQUE*'s pages a year of glorious progress has elapsed, and now we pause in our rapid ascent up the heights of fame and achievement, to enroll our record on the page of history for the instruction and edification of those who shall aspire to follow.

Yes, '92 is a good class, and proud of her history. Prominent on the field, and ready with the shekels. '92's banner has floated gloriously at every point in her career.

Our class is credited with having subscribed to the support of the 'varsity foot-ball team in our Freshman year the most liberally of any class ever in the Institute.

Then just consider the large number of men we have on the 'varsity team this year. There's sprinter Slade, who did great work in placing the pig's-skin behind the goal posts. Sailor Nilson decorated his man on the rush line. Kales, Weis, Potter, Harvey, Andrews, and Yoerg did credit to '92.

Even a thousand tongues like that of curly-headed Davis could not do justice to the exploits of our foot-ball and base-ball teams, which have given us victories with

## TECHNIQUE.

'91 and '93. In our Freshman contests with '91 we established our supremacy, winning the foot-ball game, rush, tug-of-war, and base-ball game.

Viewing the resplendent verdancy of '93, we superintended the organization of their class, "Sammy" Weis presiding, as "it is customary for a Sophomore to preside at the Freshmen's meetings."

On the foot-ball field we gave them points on the game, with the score of 8-0. In a path strewn with Freshmen's hats, collar buttons, and other appendages, we came out of the rush with the honors of the day.

"Broncho" Allen has escaped the fierce attacks of the Freshmen, who are envious of his ringlets, and he continues to cheat the barber. Then we have A'Englishman Whales to sustain the dignity of the class and of the Back Bay. Allen French has learned to "sit down," but is ever ready to be on that committee. Keyes has taken his seat on the band wagon, with the tennis championship up. Andrews holds the Tech. record for the mile run. '92 is also honored by many other winners in the athletic contests.

With the advance to our Sophomore year we are projected into a plane where we see clearly now that German is so much *easier* than French, and, analytically speaking, we are *astined* two hours' work which requires six hours' time to accomplish. Yet, with all of these physical crosses, we struggle on, seeking that successful standing which we desire. Encouraged by thoughts of some other fellow's sister, we continue our way with an ever-increasing load.

In the future '92 will earnestly endeavor to sustain that record of which she is so proud, and continue to excel in class enterprise and in the effort to advance the standard of the Institute. Beneath the resplendent halo of victories won, and work well done, '92 continues on her way to gain new laurels.



## A SONG OF '92.

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"H O, Sophomores! '92!  
May we have some lines from you?"  
Is the summons of the editor-in-chief.  
And he gets as a reply,  
"Of course our class will try,  
But the contribution must be very brief."

Now that we are Sophomores,  
Each has singled out his course;  
And here it may be well enough to state  
That the differentiation,  
In the way of education,  
Is beginning to be very, very great.

The Profs. of various courses  
Seem to take us for race-horses,  
And each makes us go at such a rapid pace,  
That if we don't keep grinding,  
In a month we can't help finding  
That rustication stares us in the face.

There's the Physics, for example,  
Where each lecture would be ample  
To keep us busy an entire week;  
But the lightning mathematician,  
That expertest electrician,  
Delivers them as fast as he can speak.

They give us every science  
And mechanical appliance  
That's embodied in the culture of the day.  
The formulæ are stunners,  
But we're told they're mere forerunners  
Of others far more intricate than they.

Our languages continue,  
And Van Daell can always pin you  
On the very thing you do not chance to know.  
But as a whole the forces  
Which control our several courses  
Train us up in just the way we ought to go.

## Sophomore Class.

### CIVIL ENGINEERING.

A star (\*) signifies Special Student.

FRANK W. ADAMS*	Newtonville.	Newtonville.
HARRY B. BAKER*	Richmond, Va.	27 St. James Ave.
CHARLES E. BUCHHOLZ.	Hampstead, L. I.	385 Columbus Ave
EDWARD C. CLARK*.	Washington, D. C.	Pleasant St.
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WALTER B. DOUGLASS . . . . .	Lowell . . . . .	Lowell.
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FREDERICK H. HOWLAND . . . . .	Providence, R. I. . . . .	17 St. James Ave.
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LEONARD METCALF . . . . .	Cambridge . . . . .	Cambridge.
ASA H. MORRILL . . . . .	Neponset . . . . .	2 High St.
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GEORGE F. ROWELL . . . . .	Peabody . . . . .	Peabody.
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TOROS TOROSSIAN . . . . .	Roustchuk, Bulgaria.	Cambridge.
PHILIP A. WARNER* . . . . .	West Newton . . . . .	West Newton.
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## TECHNIQUE.

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WALTER L. FRISBIE . . . . .	Waterbury, Ct. . . . .	70 Chandler St.
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WILLIAM E. GALLISON* . . . . .	Chelsea . . . . .	Chelsea.
HOWARD GILMORE . . . . .	North Easton . . . . .	North Easton.
GEORGE H. GOODELL . . . . .	Salem . . . . .	Salem.
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*Father Time has chipped the shell:  
What the chick is, who can tell?*

## CLASS OF '93.

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Colors, Orange and Black.

YELL: HA! HA! HA! BIZ! BOOM! BAH!  
M. I. T. NINETY-THREE! RAH! RAH! RAH!

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### History.



IN the last day of September, in the year of our Lord eighteen hundred and eighty-nine, there ascended the steps of Rogers that band of neophytes, gathered from every township from Chelsea to Mari-posa, who were to be known thereafter as the Class of '93. Upon their arrival at the top of the steps they were met by the most dignified of secretaries (his last appearance in this capacity) and directed to fill out their attendance papers. They did so after a manner, and thus '93 made its mark in the first hours of its existence.

After providing themselves according to schedule with books that they did not understand and utensils that they could not use, there lacked but one thing to the successful beginning of their career of freshmanliness, namely, a class meeting. The want was soon supplied, but the Sophomores who offered their assistance were only saved from destruction by the interposition of the President.

With ill-concealed anxiety and ardor refreshing to see, the class applied themselves to the duties of life, mastering the art of modern warfare by knocking the remaining rivets out of the condemned muskets in the Exeter Street barracks; striving after a credit in first-year chemistry by keeping awake during the lectures, and swearing to the clearness of the Professor's explanations; repeating plates for the autocrat of the drawing room, and composing themes and essays without end. Intermediate Exams. were entirely unnecessary, but as a matter of form they occurred as usual, and

## TECHNIQUE.

'93, as another matter of form, went through their first experience of the bane of Tech. existence, and came up smiling.

While these things were happening, others as important were not neglected. The eleven that was to bring glory to the orange and black practised for the game that was to be a victory. Only one circumstance prevented this termination of the contest: the Sophomores ventured upon the field, and won it. But the triumph of the latter was short-lived, and the mud upon their jackets and their disgusted countenances showed plainly who was worsted in the rush. "Everything went," but '92 went under.

This history must necessarily be short. Such will not be the case of the one which will do justice to the future deeds of the class. They will continue, on land and sea, to thrive at '92's expense, while gaining fame and experience at this curiosity shop of science. Whenever you hear men speak of the most numerous, most capable, and most promising class at Tech., that has reference to the Class of '93.



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A star (\*) signifies Special Student.

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WALTER W. PATCH . . . . .	Roxbury . . . . .	45 Quincy St.
WM. W. PEABODY* . . . . .	Gilead, Me. . . . .	524 Columbus Ave.
EDWARD G. PEASE . . . . .	Dayton, O. . . . .	26 Holyoke St.
WALTER T. PECK . . . . .	Brooklyn, N. Y. . . . .	Hotel Argyle.
BATCHELLER G. PERKINS . . . . .	Boston . . . . .	387 Beacon St.
PHILIP E. PERRY . . . . .	Jamaica Plain . . . . .	10 Gordon St.
ARTHUR S. PEVEAR . . . . .	Cambridgeport . . . . .	Cambridgeport.
HARRY M. PHILLIPS . . . . .	Keokuk, Ia. . . . .	148 Chandler St.
FRANK F. PHINNEY . . . . .	Stoughton . . . . .	Young's Hotel.
LEO W. PICKERT . . . . .	Boston . . . . .	10 Greenville St.
LORING E. PIERCE* . . . . .	East Lexington . . . . .	East Lexington.
WILLIAM B. PIPER . . . . .	Dorchester . . . . .	2 Winter St.
JOHN PLEASANTS . . . . .	Pottsville, Pa. . . . .	304 Boston St.
EDWARD A. PORTER . . . . .	Calais, Me. . . . .	57 Chandler St.
ALICE B. PRESCOTT* . . . . .	Jamaica Plain . . . . .	Pond St.
EDWARD B. RANDALL . . . . .	Medford . . . . .	Medford.
EDWARD B. READ . . . . .	Malden . . . . .	Malden.
ARTHUR G. REED . . . . .	Cambridge . . . . .	Cambridge.
JAMES H. REED . . . . .	Boston . . . . .	3 Gloucester St.
WILLIAM K. REED . . . . .	Columbus, O. . . . .	Newton.
WILLIAM S. RESOR . . . . .	Cincinnati, O. . . . .	17 St. James Ave.
ROBERT D. REYNOLDS . . . . .	Jamaica Plain . . . . .	45 Orchard St.
HARRY L. RICE . . . . .	Lawrence . . . . .	114 Chandler St.
FRANK D. RICHARDSON . . . . .	Chicago, Ill. . . . .	14 Harris Ave.
WILLIAM E. ROBERTS . . . . .	Waverley . . . . .	Waverley.
HOWARD L. ROGERS* . . . . .	Newton Centre . . . . .	Newton Centre.
GEORGE O. ROLLINS . . . . .	No. Brookfield . . . . .	161 West Brookline St.
WILLIAM M. ROSEWATER* . . . . .	Cleveland, O. . . . .	25 Berwick Park.
AUBREY RUGGLES* . . . . .	Cambridgeport . . . . .	Cambridgeport.
GEORGE W. SANBORN . . . . .	Charlestown . . . . .	81 Elm St.
EDWARD S. SANDERSON . . . . .	Scranton, Pa. . . . .	17 St. James Ave.
CHARLES G. SARGENT . . . . .	Graniteville . . . . .	11 St. James Ave.
HOWARD R. SARGENT . . . . .	Newburyport . . . . .	Newburyport.
ALBERT H. SAWYER . . . . .	Newburyport . . . . .	Newburyport.
WILLIAM H. SAYWARD . . . . .	Dorchester . . . . .	69 Monadnock St.

# TECHNIQUE.

MORRIS L. SCHWARZ . . . . .	Portsmouth, N. H.	67 Chandler St.
FREDERICO R. SEYFFERT, Jr. . . . .	Chihuahua, Mex. . . . .	42 East Newton St.
ARTHUR A. SHURTLEFF . . . . .	Boston . . . . .	9 West Cedar St.
ARTHUR W. SHURTLEFF . . . . .	Lewiston, Me. . . . .	112 Chandler St.
FREDERIC P. SIMONDS . . . . .	Salem . . . . .	Salem.
FENWICK F. SKINNER . . . . .	Boston . . . . .	2849 Washington St.
ARTHUR B. SMITH . . . . .	Providence, R. I. . . . .	249 Berkeley St.
CLARENCE W. SMITH . . . . .	Chicago, Ill. . . . .	2 Oxford Terrace.
FREDERICK D. SMITH* . . . . .	So. Framingham . . . . .	So. Framingham.
GEORGE B. SMITH . . . . .	New Britain, Ct. . . . .	9 Concord Sq.
WILLIAM A. SOLEY . . . . .	Chelsea . . . . .	Chelsea.
JOHN I. SOLOMON . . . . .	New York, N. Y. . . . .	13 St. Charles St.
FRANK M. SOUTHARD . . . . .	Brooklyn, N. Y. . . . .	145 West Newton St.
JOHN K. SOUTHER . . . . .	Fredericksburg, Va. . . . .	19 Upton St.
J. RAMSEY SPEER . . . . .	Pittsburg, Pa. . . . .	5 St. James Ave.
CHARLES M. SPOFFORD . . . . .	Georgetown.	
HERBERT W. STANWOOD . . . . .	Brookline . . . . .	27 South St.
GEORGE M. STARKWEATHER . . . . .	Pawtucket, R. I. . . . .	Pawtucket.
HENRY F. STEARNS . . . . .	Pawtucket, R. I. . . . .	
ELYWIN W. STEBBINS* . . . . .	Boston . . . . .	60 West Rutland Sq.
LONDA L. STEBBINS* . . . . .	Boston . . . . .	29 St. James Ave.
GEORGE W. STOSE . . . . .	Chicago, Ill. . . . .	214 Columbus Ave.
LOVELL B. STOWE . . . . .	Caryville . . . . .	Caryville.
FREDERICK C. SUTTER . . . . .	Detroit, Mich. . . . .	118 Boylston St.
WALTER I. SWANTON . . . . .	Gardiner, Me. . . . .	45 Milford St.
KILBURN S. SWEET* . . . . .	Kenduskeag, Me. . . . .	57 Chandler St.
CHARLES TAINTOR . . . . .	Keene, N. H. . . . .	Pond St.
THOMAS TALBOT, A. B.* . . . . .	North Billerica.	
CHARLES M. TAYLOR . . . . .	Chelsea . . . . .	Chelsea.
WINTHROP P. TENNEY . . . . .	Dorchester . . . . .	Pleasant St.
ALFRED C. THOMAS . . . . .	Cincinnati, O. . . . .	350 Columbus Ave.
PERCY H. THOMAS . . . . .	Wayland . . . . .	Wayland.
JOHN F. TOMFOHRDE . . . . .	Charlestown . . . . .	24 Mt. Vernon St.
EDWARD A. TOWLE . . . . .	Westfield . . . . .	Cambridgeport.
FREDERIC T. TOWNE . . . . .	Stamford, Ct.	
CHARLES A. TRIPP . . . . .	Hudson . . . . .	102 Chandler St.
WILLIAM A. TUCKER . . . . .	Roxbury . . . . .	55 Waverley St.
FRED L. VARNEY . . . . .	Lynn . . . . .	Lynn.
WALTER H. VORCE . . . . .	Farmington, Ct. . . . .	611 Tremont St.
AUGUSTUS B. WADSWORTH . . . . .	Plainfield, N. J. . . . .	198 Beacon St.
JAMES S. WADSWORTH . . . . .	Malden . . . . .	Malden.
SAMUEL P. WALDRON . . . . .	Coös, N. H. . . . .	2 Canton Pl.
AMASA WALKER . . . . .	North Brookfield . . . . .	80 Appleton St.
ROBERT N. WALLIS . . . . .	Fitchburg . . . . .	146 Chandler St.
FREDERIC I. WARREN . . . . .	Bay City, Mich. . . . .	17 St. James Ave.
JOHN B. WARREN* . . . . .	Roxbury . . . . .	Hillside St.
LAWRENCE J. WEBSTER . . . . .	Boston . . . . .	232 Newbury St.
WILLIAM C. WHISTON . . . . .	Newtonville . . . . .	Newtonville.

## TECHNIQUE.

---

PARKER H. WILDER . . . . .	Cincinnati, O. . . . .	69 Appleton St.
FRANK P. WILLIAMS . . . . .	East Weymouth . . . . .	13 Hancock St.
HARRY C. WILSON . . . . .	Nahant . . . . .	444 Warren St.
EDWARD L. WINGATE . . . . .	Malden . . . . .	Malden.
HARRY D. WINTRENGER . . . . .	Steubenville, O. . . . .	377 Columbus Ave.
JONATHAN E. WOODBRIDGE . . . . .	Duluth, Minn. . . . .	70 Chandler St.
EDWIN S. WOODS* . . . . .	Pullman, Ill. . . . .	152 Huntington Ave.
HENRY T. WOODS . . . . .	Somerville . . . . .	Somerville.
GEORGE F. WOOLSTON, Jr.* . . . . .	Boston . . . . .	216 West Chester Park.
VERNON A. WRIGHT* . . . . .	Boston . . . . .	51 Chestnut St.
OSVALDO YCAZA . . . . .	Apartmentado, Panama . . . . .	418 Columbus Ave.

## *In Memoriam.*

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### **THE SCHOOL OF MECHANIC ARTS,**

Organized in 1876, for thirteen years led a precarious existence at the hands of the public and the Corporation of this Institute, but for some time having shown no signs of life, was officially pronounced defunct on the twenty-eighth day of May, 1889.



# LOWELL SCHOOL OF PRACTICAL DESIGN.



CHARLES KASTNER, *Instructor.*

Miss DELPHINA WESTON, *Assistant.*

## Students.

GEORGE E. ALDRICH . . . . .	Worcester . . . . .	Worcester.
CONSTANCE E. ALLEN . . . . .	Wellesley Hills . . . . .	Wellesley Hills.
MAUD A. ALLEN . . . . .	Roxbury . . . . .	4 Grosvenor Pl.
GRACE W. ANGUS . . . . .	Montreal . . . . .	Cambridge.
ELIZABETH C. BATES . . . . .	Newton . . . . .	Newton.
JENNIE BROOKS . . . . .	Salem . . . . .	Salem.
LOUIS H. BROWN . . . . .	Leominster . . . . .	Leominster.
EDITH BURBANK . . . . .	Portsmouth, N. H. . . . .	Medford.
LEONARD L. CAIN . . . . .	West Hingham . . . . .	West Hingham.
BENJAMIN K. CARR . . . . .	Melrose . . . . .	Melrose.
JEANNETTE H. CHOATE . . . . .	West Somerville . . . . .	West Somerville.
LOUIS W. CLARK . . . . .	Middleboro . . . . .	Middleboro.
ELSIE B. CLARKE . . . . .	Jamaica Plain . . . . .	Centre St.
EMMA L. COLBY . . . . .	Charlestown . . . . .	Waverley House.
ISABEL N. COLE . . . . .	Newton . . . . .	Newton.
FAITH W. COLLINS . . . . .	Pittsfield . . . . .	4 Mt. Vernon St.
KATHERINE L. CONNER . . . . .	South Boston . . . . .	8 Pacific St.
WILLIAM W. DANSEREAU . . . . .	Marlboro . . . . .	Marlboro.
CORA J. DE SMEDT . . . . .	Roxbury . . . . .	61 Bower St.
LUVIN E. DODGE . . . . .	Dover . . . . .	Dover.
WILLIAM J. EDWARDS . . . . .	Boston . . . . .	74 East Brookline St.
MAY E. EMERY . . . . .	Charlestown . . . . .	27 Green St.
EUNICE F. FAULKNER . . . . .	South Boston . . . . .	480 Fourth St.
MYRON P. FORD . . . . .	East Weymouth . . . . .	East Weymouth.
EDITH FROST . . . . .	Somerville . . . . .	Somerville.



# TECHNIQUE.

EMMA A. HASKELL . . . . .	Charlestown . . . . .	11 Cross St.
CLINTON M. HILL . . . . .	Saugus . . . . .	Saugus.
MARIA L. HILL . . . . .	Salem . . . . .	Somerville.
ELLA F. JOSEPHS . . . . .	Quincy . . . . .	Quincy.
ELIZABETH A. LADD . . . . .	Needham . . . . .	Needham.
BENJAMIN M. LINCOLN . . . . .	Taunton . . . . .	Taunton.
FRED A. LUCE . . . . .	Haverhill . . . . .	Haverhill.
WILLIAM D. LUCE . . . . .	Haverhill . . . . .	Haverhill.
MARY W. LYMAN . . . . .	Bolton . . . . .	795 Washington St.
FRIEDA T. MAASS . . . . .	Boston . . . . .	547 Columbus Ave.
CHARLES C. McDUFFIE . . . . .	Haverhill . . . . .	Haverhill.
HARRY F. MEANS . . . . .	South Boston . . . . .	104½ Dorchester St.
WILLIAM F. MEEHAN.		
MARY D. MILLER . . . . .	Dummerston, Vt. . . . .	99 Waltham St.
EMMA C. MILLIKEN . . . . .	Chelsea . . . . .	Chelsea.
FRED C. MOORE . . . . .	Newton Highlands.	
HARRY S. PARK . . . . .	Waltham . . . . .	Waltham.
WALTER F. PRATT . . . . .	North Weymouth . . . . .	North Weymouth.
ANNAH R. PROUTY . . . . .	Chelsea . . . . .	Chelsea.
FRANK L. RAY . . . . .	Eastport, Me. . . . .	195 West Springfield St.
GENIE W. RICHARDSON . . . . .	Stoughton . . . . .	Stoughton.
KATE L. ROGERS . . . . .	Hawaiian Islands . . . . .	54 Appleton St.
FREDERICK A. SARGENT . . . . .	Melrose . . . . .	Melrose.
MARY M. SHEDD . . . . .	Somerville . . . . .	Somerville.
WILLIAM F. SIDELINGER . . . . .	Quincy . . . . .	Quincy.
WARREN F. SNOW . . . . .	Brewster . . . . .	195 West Springfield St.
ETHEL STANWOOD . . . . .	Wellesley Hills . . . . .	Wellesley Hills.
ELIZABETH M. THACHER . . . . .	Dorchester . . . . .	Stoughton St.
ALVAH B. THOMPSON . . . . .	Denver, Col. . . . .	2741 Washington St.
FREDERICK W. WEST . . . . .	Haverhill.	
THERESA WICKSELL . . . . .	Dorchester . . . . .	98 Savin Hill Ave.
HERBERT D. WILLIAMS . . . . .	Newton Centre . . . . .	Newton Centre.
REUBEN E. WOODS . . . . .	South Boston . . . . .	876 Fourth St.



# Summary.

## BY COURSES.

### SCHOOL OF INDUSTRIAL SCIENCE.

	SENIOR.	JUNIOR.	SOPHOMORE.	TOTAL.
Course I. . . . .	35	36	43	114
Course II. . . . .	39	59	53	151
Course III. . . . .	5	3	11	19
Course IV. . . . .	12	39	44	95
Course V. . . . .	19	21	12	52
Course VI. . . . .	22	35	61	118
Course VII. . . . .	3	2	6	11
Course VIII. . . . .	3	2	2	7
Course IX. . . . .	7	5	15	27
Course X. . . . .		11	3	14
Course XI. . . . .			5	5
Totals . . . . .	145	213	255	613
Freshmen, Regulars . . . . .				261
Specials . . . . .				32
For advanced degree . . . . .				3
				909
LOWELL SCHOOL OF DESIGN . . . . .				58
Grand Total . . . . .				967

# Summary.

## BY STATES.

Massachusetts . . . . .	533	Tennessee . . . . .	4
Connecticut . . . . .	38	Iowa . . . . .	4
Ohio . . . . .	36	Kentucky . . . . .	4
Illinois . . . . .	31	Vermont . . . . .	3
Maine . . . . .	29	Oregon . . . . .	3
New York . . . . .	27	Maryland . . . . .	3
Rhode Island . . . . .	25	Indiana . . . . .	3
Pennsylvania . . . . .	23	Louisiana . . . . .	3
New Hampshire . . . . .	20	Arkansas . . . . .	2
New Jersey . . . . .	13	West Virginia . . . . .	2
Michigan . . . . .	13	Georgia . . . . .	2
California . . . . .	10	Washington . . . . .	2
Minnesota . . . . .	9	Dakota . . . . .	1
District of Columbia . . . . .	9	South Carolina . . . . .	1
Wisconsin . . . . .	8	North Carolina . . . . .	1
Missouri . . . . .	8	Nebraska . . . . .	1
Colorado . . . . .	6	Alabama . . . . .	1
Virginia . . . . .	6	Florida . . . . .	1

## BY FOREIGN COUNTRIES.

Canada . . . . .	6	Trinidad . . . . .	1
Brazil . . . . .	2	Japan . . . . .	1
Porto Rico . . . . .	2	Hawaiian Islands . . . . .	1
Turkey . . . . .	2	Bulgaria . . . . .	1
Mexico . . . . .	2	Guatemala . . . . .	1
France . . . . .	1	Panama . . . . .	1
Ireland . . . . .	1	Peru . . . . .	1
Scotland . . . . .	1		

Thirty-five States, the District of Columbia, and fifteen foreign countries are represented.

Women students . . . . .	33
Graduate students . . . . .	50
Instructors of all grades . . . . .	92

# MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

## '89 Class-Day Exercises.

MAY 27, 1889.

### Order of Exercises.

MUSIC . . . . .	ORCHESTRA.
HISTORY . . . . .	FRANKLIN WARREN HOBBS.
MUSIC . . . . .	GLEE CLUB.
STATISTICS . . . . .	JAMES WELD CARTWRIGHT, JR.
MUSIC . . . . .	ORCHESTRA.
PROPHECY . . . . .	WILLIAM BARTLETT THURBER.
MUSIC . . . . .	GLEE CLUB.
ODE . . . . .	JOHN LAWRENCE MAURAN.
CLASS-DAY SONG (CARTWRIGHT) . . . . .	JAMES WELD CARTWRIGHT, JR.
MUSIC . . . . .	ORCHESTRA.

### CLASS-DAY OFFICERS.

#### FIRST MARSHAL.

JONATHAN PARKER BISHOP FISKE.

#### SECOND MARSHAL.

FRANKLIN WARREN HOBBS.

#### THIRD MARSHAL.

HOLLIS FRENCH.

### CLASS-DAY COMMITTEE.

ARTHUR WHITTIER AYER.

GEORGE MARSHALL BASFORD.

JAMES WELD CARTWRIGHT, JR.

FRANK LIBBY DAME.

NATHAN DURFEE.

JAMES PORTER GILBERT.

JOHN LAWRENCE MAURAN.

WILLIAM ELTON MOTT.

FRED WALTER RANNO.

RICHARD LEE RUSSELL.

WILLIAM BARTLETT THURBER.

JASPER WHITING.

## Class-Day Exercises.

THE sound of the Tech. cheer died away as '89 filed slowly to their seats in Huntington Hall on the afternoon of May 27, 1889. The Senior Class was about to celebrate Class Day.

Mr. J. P. B. Fiske, the President of the class, opened the exercises with a brief address of welcome. In closing he said that he hoped the under classes might profit in the future by the example of '89 in the past. Then he introduced the Historian, Mr. F. W. Hobbs, who recounted the important events in which the class had participated. He did not forget a parting reference to "Jimmy," and a timely warning to persons of delicate health not to listen to the graduating theses.

The Glee Club sang acceptably, after which Mr. Cartwright, the Statistician, was announced. Long practice in drawing colored charts, as part of the work of his course of study, enabled him to represent the statistics graphically to the audience. Mr. Cartwright was succeeded by Mr. Thurber, who united the wisdom of a prophet to the genius of a poet. His poetic taste was shown in a humorous poem, which told of the future of the members of '89. The hits were numerous, and were thoroughly enjoyed by the class.

After the Glee Club had sung, Mr. Mauran read the Class Ode, composed by him and set to music by Mr. Goodrich. Then the original Class-Day Song was rendered by Mr. Cartwright, the class joining in the chorus. The same gentleman sang the Class Ode with feeling, and at its conclusion Mr. Fiske closed the exercises with a short farewell in verse. '89 responded with "Technology! Rah! Rah! Rah!!" and filed slowly from the hall, to assemble in the corridor below, where, for the last time as students, they cheered their *Alma Mater* and sang the Class Ode.

The guests filled the corridor for some time, for it rained without, and while they waited for conveyances, '90 and '92 announced their presence by feeble class yells. The crowded corridor became empty gradually, and an expression of pain flitted over the face of the autocrat of the "Cage" as '89 withdrew, and she thought of the incoming Freshmen, who would soon appear to ask of her the price of umbrellas and drawing boards.

The evening reception was well attended, notwithstanding the rain. The Architectural room was handsomely decorated by the committee appointed for the purpose. After an evening of thorough enjoyment, '89 went home to dream of sheepskins.

# Graduating Exercises.

HUNTINGTON HALL, TUESDAY, MAY 28, 1889.

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ADDRESS BY THE PRESIDENT.

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READING OF ABSTRACTS OF THESES.

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ADDRESS TO THE GRADUATING CLASS, BY THE REV. PHILLIPS BROOKS, D. D.

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## Conferring of Degrees.

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### LIST OF GRADUATES.

GEO. M. BASFORD . . . . .	II.	HOLLIS FRENCH . . . . .	VI.
EDWARD J. BEACH . . . . .	V.	EARL W. GANNETT . . . . .	VI.
ARTHUR B. BELLINGS . . . . .	II.	JAMES P. GILBERT . . . . .	V.
WILLARD G. BIXBY . . . . .	II.	BENJAMIN W. GUPPY . . . . .	I.
ZENAS W. BLISS . . . . .	II.	HENRY M. HOBART . . . . .	VI.
CHAS. N. BORDEN . . . . .	II.	FRANKLIN W. HOBBS . . . . .	II.
FREDERICK W. BRADLEY . . . . .	VI.	GEORGE U. G. HOLMAN . . . . .	VI.
FREDERICK H. BRAINERD . . . . .	III.	RICHARD HOOKER . . . . .	IV.
LUTHER W. BRIDGES . . . . .	II.	FREDERICK L. HOPKINS . . . . .	V.
JOSEPH N. BULKLEY . . . . .	VI.	HARRY H. HUNT . . . . .	VI.
FRANK H. CILLEY . . . . .	I.	EDWARD S. HUTCHINS . . . . .	II.
FRED CRABTREE . . . . .	V.	LEWIS E. JOHNSON . . . . .	II.
HENRY A. CRAIGIN . . . . .	II.	WILLIAM S. JOHNSON . . . . .	I.
CHAS. H. CROMWELL . . . . .	II.	WALTER H. KILHAM . . . . .	IV.
ROLAND N. CUTTER . . . . .	I.	ARTHUR D. KINSMAN . . . . .	VIII.
FRANK L. DAME . . . . .	VI.	LEWIS H. KUNHARDT . . . . .	II.
WILLIAM S. DAVENPORT . . . . .	V.	GEORGE B. LAUDER . . . . .	VI.
ARTHUR L. DAVIS . . . . .	II.	FRANK A. LAWS . . . . .	VI.
CHAS. B. DODGE . . . . .	IX.	WILLIAM W. LEWIS . . . . .	II.
NATHAN DUFFEE . . . . .	II.	JOHN W. LINZEE, Jr. . . . .	I.
HARRISON G. DYAR . . . . .	V.	HARRISON LORING, Jr. . . . .	II.
ARTHUR V. EDWARDS . . . . .	IV.	SAMUEL H. MILDRAH . . . . .	I.
JONATHAN P. B. FISKE . . . . .	VI.	WILLIAM E. MOTT . . . . .	I.
ALFRED W. FRENCH . . . . .	I.	CLAYTON W. PIKE . . . . .	VI.
EDWARD V. FRENCH . . . . .	II.	CHARLES W. POWER . . . . .	VI.

# TECHNIQUE.

---

FRED W. RANNO . . . . .	I.	WILLIAM B. THURBER . . . . .	IX.
GEORGE L. RICHARDSON . . . . .	I.	ARTHUR E. TRUESDELL . . . . .	VI.
GEORGE W. ROUNDS . . . . .	VI.	WILLIAM W. UNDERHILL . . . . .	II.
RICHARD L. RUSSELL . . . . .	I.	CHARLES H. WARNER . . . . .	VI.
FRANK E. SANBORN . . . . .	II.	GEORGE C. WHIPPLE . . . . .	I.
ALBERT SAUVEUR . . . . .	III.	JASPER WHITING . . . . .	III.
EDWARD V. SHEPARD . . . . .	I.	FRANK P. WHITNEY . . . . .	VI.
WILLIAM G. SNOW . . . . .	II.	ROBERT C. WILLIAMS . . . . .	III.
DELIA STICKNEY . . . . .	V.	ARTHUR L. WILLISTON . . . . .	II.
GEORGE G. STONE . . . . .	III.	VICTOR WINDETT . . . . .	II.
RALPH SWEETLAND . . . . .	II.	CAROLINE A. WOODMAN, A. B. . .	VII.
SANFORD E. THOMPSON . . . . .	I.	WALTER G. WUICHET . . . . .	II.
FRED H. THORPE . . . . .	V.		

## Certificates Awarded.

TO

GEORGE S. BARROWS . . . . .	Philadelphia, Pa.
STEPHEN A. BREED . . . . .	Lynn, Mass.
GEORGE A. BURRELL . . . . .	East Bridgewater, Mass.
ARTHUR B. FULLER . . . . .	Middleton, Mass.
LOUIS L. LINCOLN . . . . .	Taunton, Mass.
H. LESTER NOYES . . . . .	Abington, Mass.
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Of the School of Mechanic Arts.

GRACE T. BAKER . . . . .	Weymouth, Mass.
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WILLIAM C. HUNT . . . . .	New Bedford, Mass.
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ANNIE H. NEWTON . . . . .	Cambridge, Mass.
WINSLOW PARSONS . . . . .	Saugus, Mass.
LIZZIE PHILBRICK . . . . .	Newton Centre, Mass.
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CLARABEL STETSON . . . . .	Roxbury, Mass.
HATHORN J. THOMPSON . . . . .	Elmira, N. Y.

Of the Lowell School of Practical Design.



*"Search not to find what lies too deeply hid,  
Nor to know things, where knowledge is forbid."*



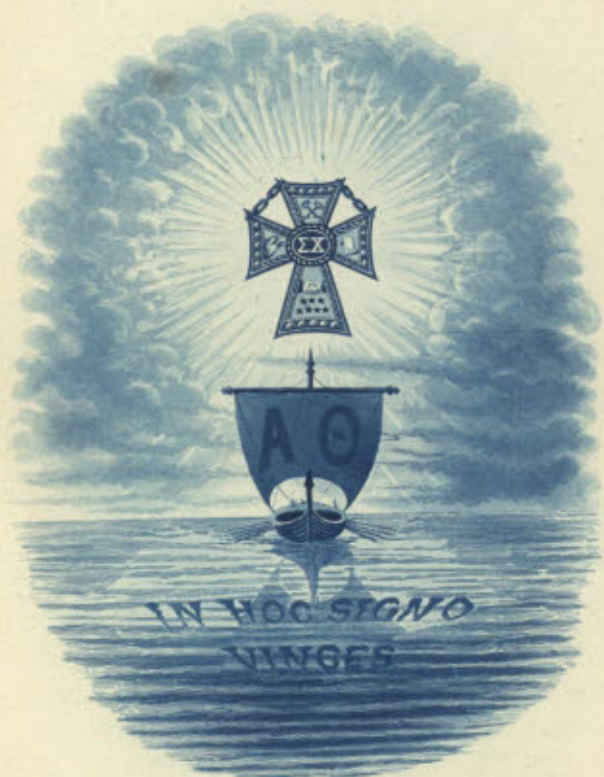
# Sigma Chi Fraternity.

FOUNDED 1855.

## ROLL OF CHAPTERS.

*1855.	A.	MIAMI UNIVERSITY . . . . .	Oxford, O.
1857.	Γ.	OHIO WESLEYAN UNIVERSITY . . . . .	Delaware, O.
1857.	H.	UNIVERSITY OF MISSISSIPPI . . . . .	Oxford, Miss.
1858.	Λ.	INDIANA UNIVERSITY . . . . .	Bloomington, Ind.
*1858.	I.	JEFFERSON COLLEGE . . . . .	Canonsburg, Pa.
*1859.	N.	WASHINGTON COLLEGE . . . . .	Washington, Pa.
1859.	Ξ.	DE PAUW UNIVERSITY . . . . .	Greencastle, Ind.
1859.	O.	DICKINSON COLLEGE . . . . .	Carlisle, Pa.
1859.	Ψ.	UNIVERSITY OF VIRGINIA . . . . .	Charlottesville, Va.
*1859.	Π.	ERSKINE COLLEGE . . . . .	Due West, S. C.
*1860.	Σ.	LA GRANGE SYNODICAL COLLEGE . . . . .	La Grange, Tenn.
1863.	Θ.	PENNSYLVANIA COLLEGE . . . . .	Gettysburg, Pa.
1864.	K.	BUCKNELL UNIVERSITY . . . . .	Lewisburg, Pa.
*1864.	E.	COLUMBIAN UNIVERSITY . . . . .	Washington, D. C.
*1865.	Υ.	POLYTECHNIC COLL. OF THE STATE OF PA. . . . .	Philadelphia, Pa.
1866.	Z.	WASHINGTON AND LEE UNIVERSITY . . . . .	Lexington, Va.
1866.	P.	BUTLER UNIVERSITY . . . . .	Irvington, Ind.
*1867.	Φ.	LAFAYETTE COLLEGE . . . . .	Easton, Pa.
1867.	M.	DENISON UNIVERSITY . . . . .	Granville, O.
1869.	Ω.	NORTHWESTERN UNIVERSITY . . . . .	Evanston, Ill.
1871.	X.	HANOVER COLLEGE . . . . .	Hanover, Ind.
*1872.	Δ.	UNIVERSITY OF GEORGIA . . . . .	Athens, Ga.
*1872.	N.	CUMBERLAND UNIVERSITY . . . . .	Lebanon, Tenn.
*1872.	Π.	HOWARD COLLEGE . . . . .	Marion, Ala.
1872.	T.	ROANOKE COLLEGE . . . . .	Salem, Va.
1872.	Σ. Σ.	HAMPDEN-SYDNEY COLLEGE . . . . .	Hampden-Sydney, Va.
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*1874.	B. B.	MISSISSIPPI COLLEGE . . . . .	Clinton, Miss.
1874.	Γ. Γ.	RANDOLPH-MACON COLLEGE . . . . .	Ashland, Va.
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*1874.	E. E.	MONMOUTH COLLEGE . . . . .	Monmouth, Ill.
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1876.	Z. Z.	CENTRE COLLEGE . . . . .	Danville, Ky.
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*1881.	K. K.	UNIVERSITY OF ILLINOIS . . . . .	Champaign, Ill.
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1886.	A. P.	LEHIGH UNIVERSITY . . . . .	Bethlehem, Pa.
1888.	A. Σ.	UNIVERSITY OF MINNESOTA . . . . .	Minneapolis, Minn.
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## ALPHA THETA CHAPTER.

ESTABLISHED, MARCH 22, 1882.

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CHANNING MCGREGORY WELLS.	MARTIN JOHN SPAULDING CROMWELL.
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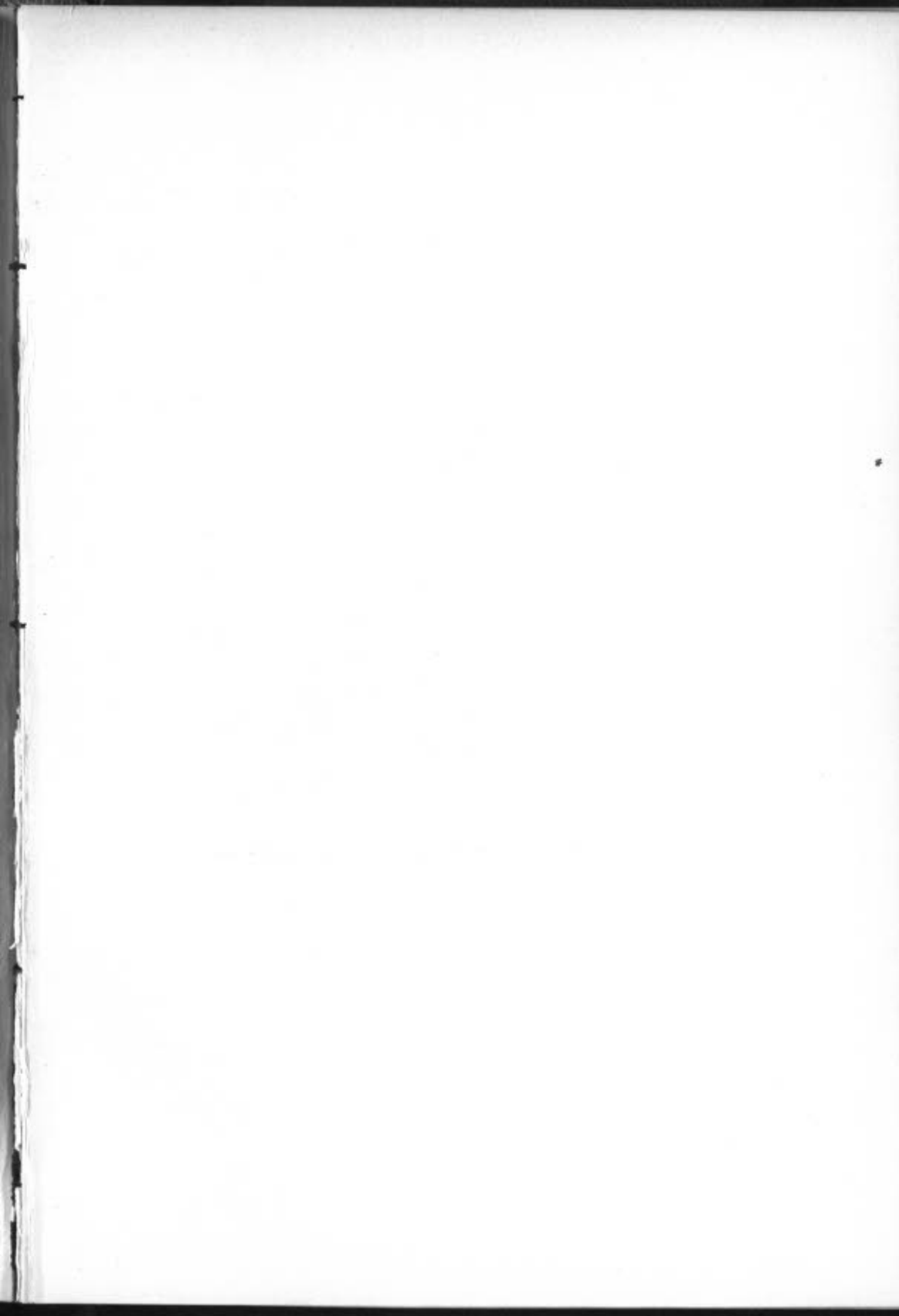
# Theta Xi Fraternity.

---

## ROLL OF CHAPTERS.

- 1864. A. Rensselaer Polytechnic Institute.
- 1867. B. Yale College.
- 1874. Γ. Stevens Institute of Technology.
- 1885. Δ. Massachusetts Institute of Technology.







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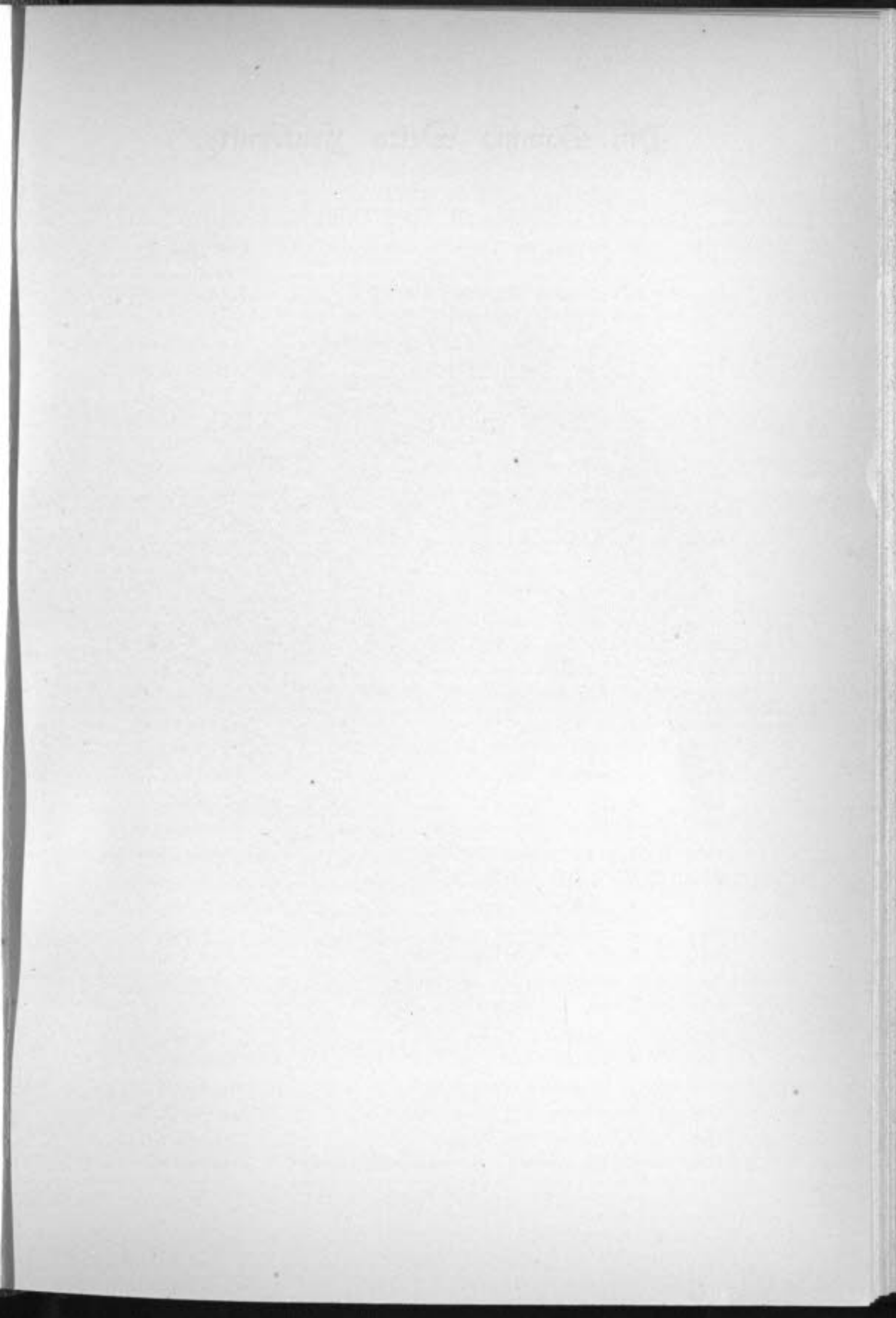
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MORTON EDDY COBB.	WILLIAM ELTON MOTT.
HENRY JOHN CONANT.	TIMOTHY WILSON SPRAGUE.

# Phi Gamma Delta Fraternity.

FOUNDED 1855.

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1848.	A.	WASHINGTON AND JEFFERSON COLLEGE . . . . .	Washington, Pa.
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1855.	H.	MARIETTA COLLEGE . . . . .	Marietta, O.
1856.	A.	DE PAUW UNIVERSITY . . . . .	Greencastle, Ind.
1856.	N.	BETHEL COLLEGE . . . . .	Russellville, Ky.
1858.	Ξ.	PENNSYLVANIA COLLEGE . . . . .	Gettysburg, Pa.
1860.	Π.	ALLEGHANY COLLEGE . . . . .	Meadville, Pa.
1864.	T.	HANOVER COLLEGE . . . . .	Hanover, Ind.
1865.	T.	COLLEGE OF THE CITY OF NEW YORK . . . . .	New York City.
1866.	Ψ.	WARASH COLLEGE . . . . .	Crawfordsville, Ind.
1866.	Ω.	COLUMBIA COLLEGE . . . . .	New York City.
1866.	A. Δ.	ILLINOIS WESLEYAN UNIVERSITY . . . . .	Bloomington, Ill.
1866.	B. Δ.	ROANOKE COLLEGE . . . . .	Salem, Va.
1867.	Γ. Δ.	KNOX COLLEGE . . . . .	Galesburg, Ill.
1867.	E. Δ.	MUHLENBERG COLLEGE . . . . .	Allentown, Pa.
1869.	Θ. Δ.	OHIO WESLEYAN UNIVERSITY . . . . .	Delaware, O.
1870.	Δ. Δ.	HAMPDEN-SIDNEY COLLEGE . . . . .	Hampden-Sidney, Va.
1871.	K. Δ.	UNIVERSITY OF GEORGIA . . . . .	Athens, Ga.
1871.	Z.	INDIANA STATE UNIVERSITY . . . . .	Bloomington, Ind.
1875.	N. Δ.	YALE UNIVERSITY . . . . .	New Haven, Ct.
1878.	O. Δ.	OHIO STATE UNIVERSITY . . . . .	Columbus, O.
1881.	B.	UNIVERSITY OF PENNSYLVANIA . . . . .	Philadelphia, Pa.
1882.	Δ.	BUCKNELL UNIVERSITY . . . . .	Lewisburg, Pa.
1882.	Δ. Ξ.	UNIVERSITY OF CALIFORNIA . . . . .	Berkeley, Cal.
1882.	Π. Δ.	UNIVERSITY OF KANSAS . . . . .	Lawrence, Kan.
1882.	P. Δ.	WOOSTER UNIVERSITY . . . . .	Wooster, O.
1883.	Σ. Δ.	LAFAYETTE COLLEGE . . . . .	Easton, Pa.
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1885.	A. Φ.	UNIVERSITY OF MICHIGAN . . . . .	Ann Arbor, Mich.
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1886.	Z. Φ.	WILLIAM JEWELL COLLEGE . . . . .	Liberty, Mo.
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1888.	K. N.	CORNELL UNIVERSITY . . . . .	Ithaca, N. Y.
1889.	I. M.	MASSACHUSETTS INSTITUTE OF TECHNOLOGY . . . . .	Boston, Mass.





*Drach's Photo.*

# Phi Gamma Delta Fraternity.

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## IOTA MU CHAPTER.

ESTABLISHED MARCH 25, 1889.

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ELISHA LEE, Jr.

CLEMENT MARCH.

HARRY CHARLES PARKES.

JAMES RAMSAY SPEER.



# Delta Tau Delta Fraternity.

FOUNDED 1859.

## ROLL OF CHAPTERS.

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Alpha . . .	ALLEGHANY COLLEGE . . . . .	Meadville, Pa.
Gamma . . .	WASHINGTON AND JEFFERSON COLLEGE . . . . .	Washington, Pa.
Theta . . .	BETHANY COLLEGE . . . . .	Bethany, W. Va.
Nu . . . .	LAFAYETTE COLLEGE . . . . .	Easton, Pa.
Rho . . . .	STEVENS INSTITUTE TECHNOLOGY . . . . .	Hoboken, N. J.
Tau . . . .	FRANKLIN AND MARSHALL COLLEGE . . . . .	Lancaster, Pa.
Upsilon . . .	RENSSELAER POLYTECHNIC INSTITUTE . . . . .	Troy, N. Y.
Beta Lambda .	LEHIGH UNIVERSITY . . . . .	Bethlehem, Pa.
Beta Nu . . .	MASSACHUSETTS INSTITUTE TECHNOLOGY . . . . .	Boston, Mass.
Beta Mu . . .	TUFTS COLLEGE . . . . .	College Hill, Mass.
Beta Sigma . .	BOSTON UNIVERSITY . . . . .	Boston, Mass.

### *DIVISION OF THE NORTH.*

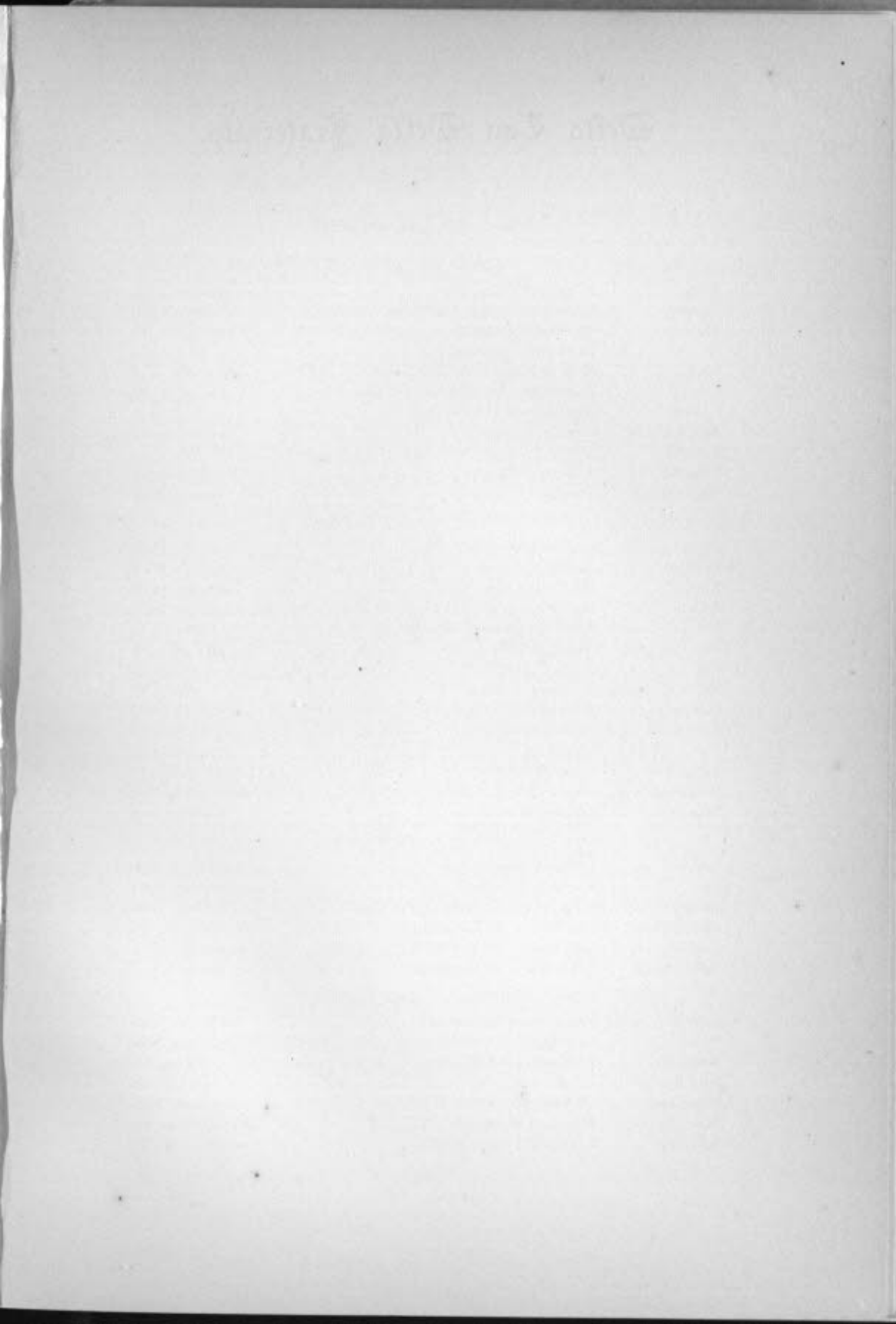
Delta . . . .	UNIVERSITY OF MICHIGAN . . . . .	Ann Arbor, Mich.
Epsilon . . .	ALBION COLLEGE . . . . .	Albion, Mich.
Kappa . . . .	HILLSDALE COLLEGE . . . . .	Hillsdale, Mich.
Iota . . . .	MICHIGAN AGRICULTURAL COLLEGE . . . . .	Agricultural College, Mich.
Mu . . . . .	OHIO WESLEYAN UNIVERSITY . . . . .	Delaware, O.
Psi . . . . .	WOOSTER UNIVERSITY . . . . .	Wooster, O.
Chi . . . . .	KENYON COLLEGE . . . . .	Gambier, O.
Eta . . . . .	BUCHTEL COLLEGE . . . . .	Akron, O.
Zeta . . . . .	ADELBERT COLLEGE . . . . .	Cleveland, O.
Beta . . . . .	OHIO UNIVERSITY . . . . .	Athens, O.
Phi . . . . .	HANOVER COLLEGE . . . . .	Hanover, O.
Beta Alpha . .	INDIANA UNIVERSITY . . . . .	Bloomington, Ind.
Beta Beta . . .	DE PAUW UNIVERSITY . . . . .	Greencastle, Ind.
Beta Zeta . . .	BUTLER UNIVERSITY . . . . .	Irvington, Ind.

### *DIVISION OF THE WEST.*

Omicron . . .	UNIVERSITY OF IOWA . . . . .	Iowa City, Iowa.
Xi . . . . .	SIMPSON COLLEGE . . . . .	Indianola, Iowa.
Omega . . . .	IOWA STATE COLLEGE . . . . .	Ames, Iowa.
Beta Kappa . .	UNIVERSITY OF COLORADO . . . . .	Boulder, Col.
Beta Eta . . .	UNIVERSITY OF MINNESOTA . . . . .	Minneapolis, Minn.
Beta Gamma . .	UNIVERSITY OF WISCONSIN . . . . .	Madison, Wis.

### *DIVISION OF THE SOUTH.*

Lambda . . . .	VANDERBILT UNIVERSITY . . . . .	Nashville, Tenn.
Pi . . . . .	UNIVERSITY OF MISSISSIPPI . . . . .	University of Mississippi, Miss.
Beta Delta . . .	UNIVERSITY OF GEORGIA . . . . .	Athens, Ga.
Beta Epsilon . .	EMORY COLLEGE . . . . .	Oxford, Ga.
Beta Theta . . .	UNIVERSITY OF THE SOUTH . . . . .	Sewanee, Tenn.
Beta . . . . .	TULANE UNIVERSITY . . . . .	New Orleans, La.
Beta Iota . . .	UNIVERSITY OF VIRGINIA . . . . .	Charlottesville, Va.





# Delta Tau Delta Fraternity.

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## BETA NU CHAPTER.

ESTABLISHED MAY, 1889.

---

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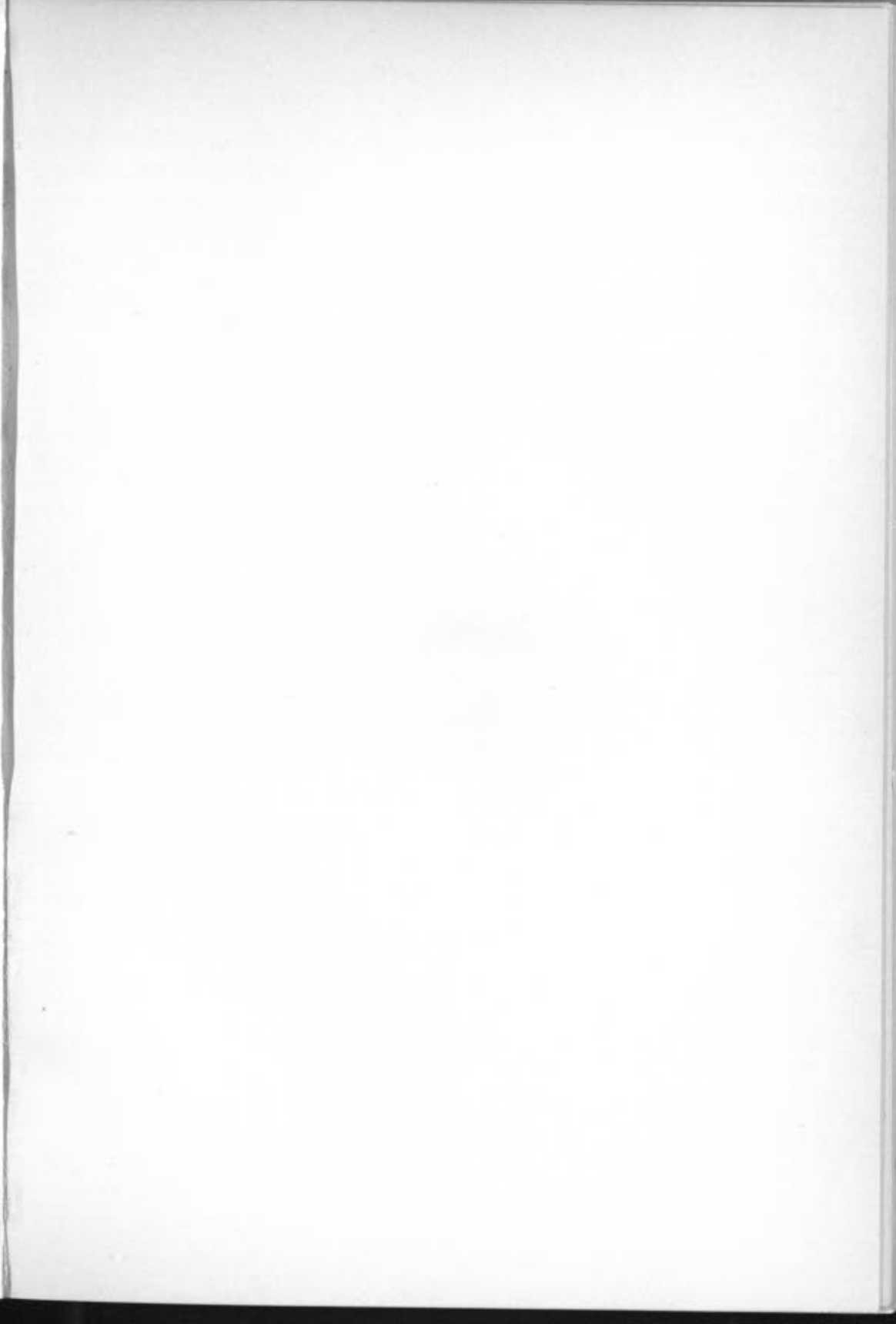
LOUIS G. SCHULTZ.

# Fraternity of Delta Psi.

---

## ROLL OF CHAPTERS.

<i>A.</i>	COLUMBIA COLLEGE . . . . .	New York City.
<i>A.</i>	UNIVERSITY OF PENNSYLVANIA . . . . .	Philadelphia, Pa.
<i>E.</i>	TRINITY COLLEGE . . . . .	Hartford, Ct.
<i>I.</i>	UNIVERSITY OF ROCHESTER . . . . .	Rochester, N. Y.
<i>A.</i>	WILLIAMS COLLEGE . . . . .	Williamstown, Mass.
<i>Φ.</i>	UNIVERSITY OF MISSISSIPPI . . . . .	Mississippi.
<i>Υ.</i>	UNIVERSITY OF VIRGINIA . . . . .	Virginia.
<i>Σ.</i>	SHEFFIELD SCIENTIFIC SCHOOL . . . . .	New Haven, Conn.
<i>T.</i>	MASSACHUSETTS INSTITUTE OF TECHNOLOGY . . . . .	Boston, Mass.







# Fraternity of Delta Psi.

---

## TAU CHAPTER.

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### DELTA UPSILON.

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LINCOLN C. HEYWOOD . . . . .	Brown.

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WALLIS EASTBORN HOWE . . . . .	Lehigh.
ARTHUR L. WHEELER . . . . .	Brown.

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CHARLES H. ALDEN, Jr. . . . .	University of Minn.

### KAPPA ALPHA.

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C. SCHUYLER DAVIS . . . . .	Union.

### PHI DELTA THETA.

AMOS H. PLUMB . . . . .	Kansas State University.
-------------------------	--------------------------

### PSI UPSILON.

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WM. ESTY . . . . .	Amherst.
F. H. BRIGGS . . . . .	University of Rochester.

### SIGMA PHI.

FRANCIS STUART VIELÉ . . . . .	Hobart.
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EVERETT MORSS, '85.

WILLIAM H. CHADBOURNE, '86.

FREDERICK H. NEWELL, '85.

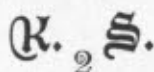
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GEORGE WARREN FULLER.

GEORGE EDWARD MERRICK.

LOUIS SCHMIDT.

EDMUND THOMAS SIMPSON.

HARRY BURLINGAME TAYLOR.

WILLIS RODNEY WHITNEY.

1891.

STERLING TUCKER DOW.

HERBERT EMERSON HATHAWAY.

ARTHUR FORREST SHATTUCK.

ARTHUR CARLTON SMITH.

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L. KIMBALL RUSSELL, '86.

GEORGE L. HEATH, '88.

ARTHUR J. CONNER, '88.

ARTHUR M. FORRISTALL, '88.

JAMES P. GILBERT, '89.

JAMES W. CARTWRIGHT, '89.

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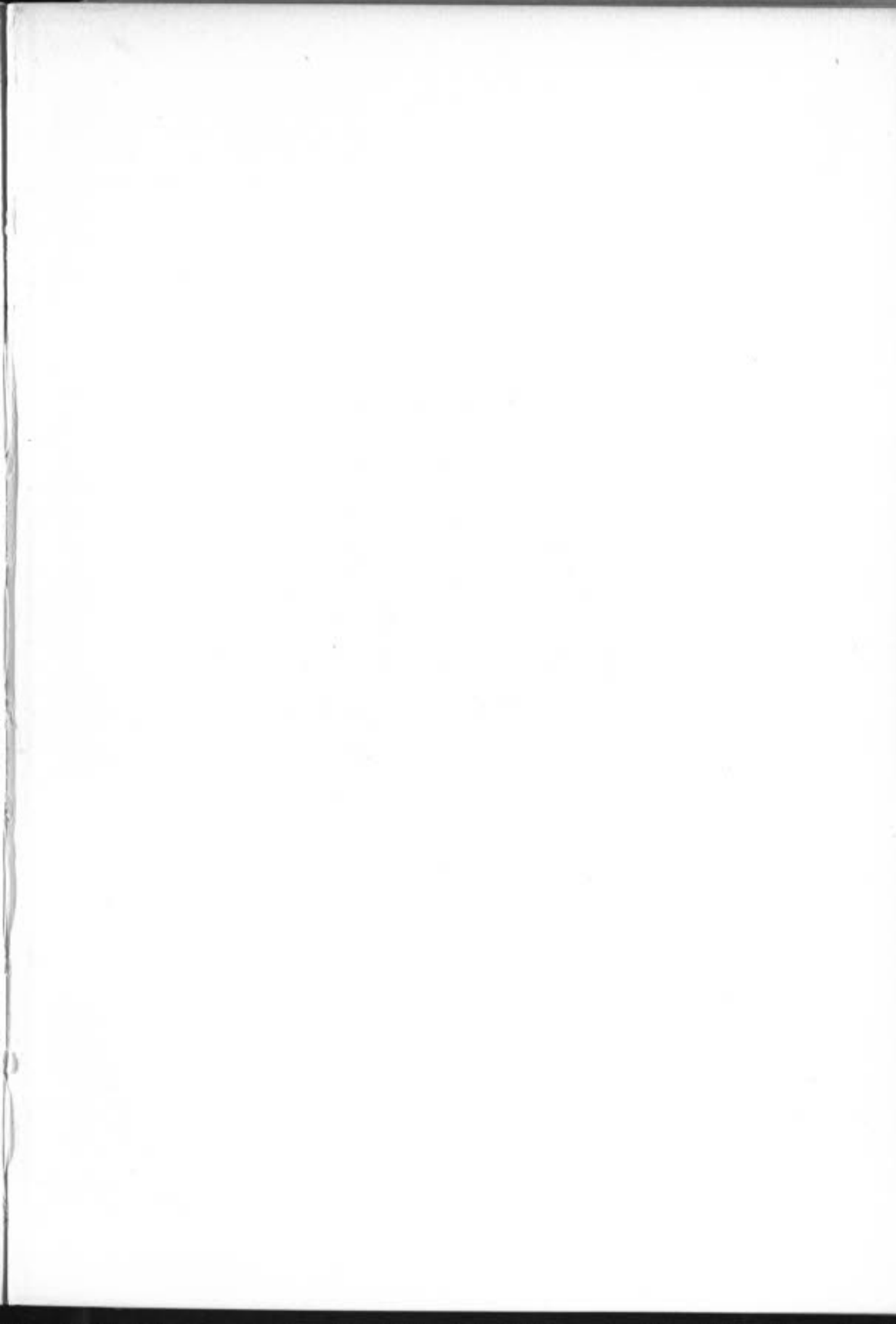
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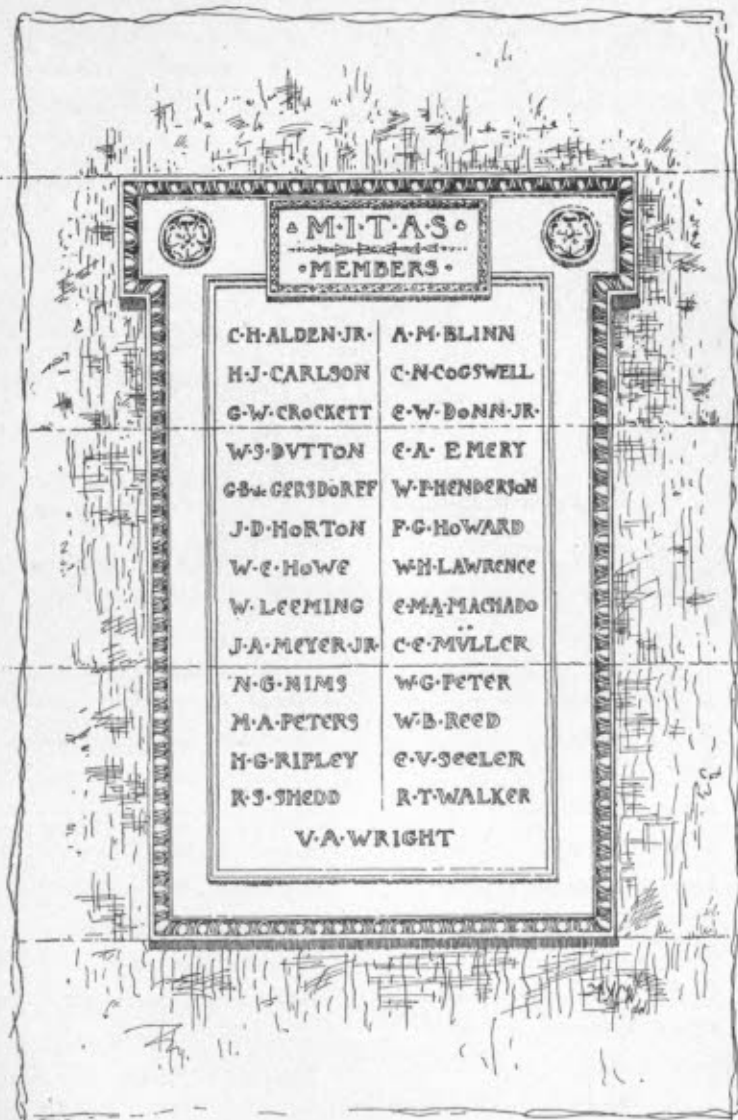
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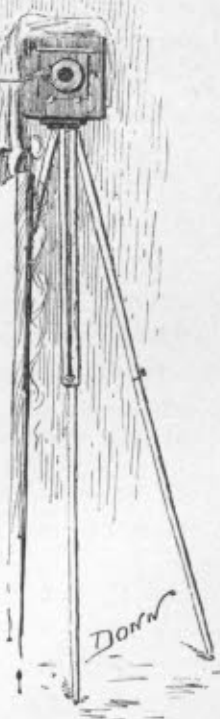
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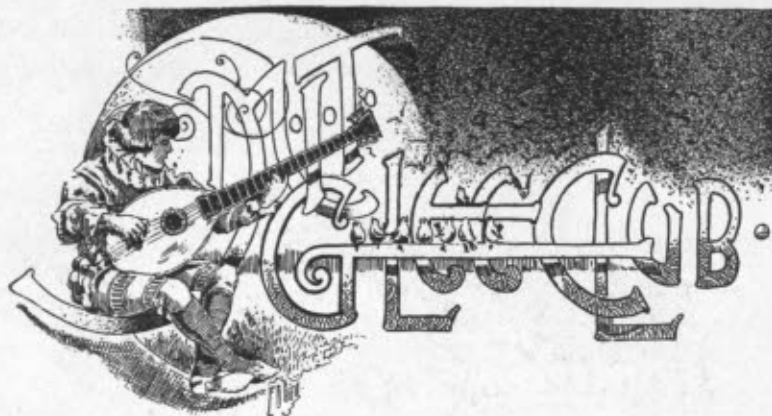
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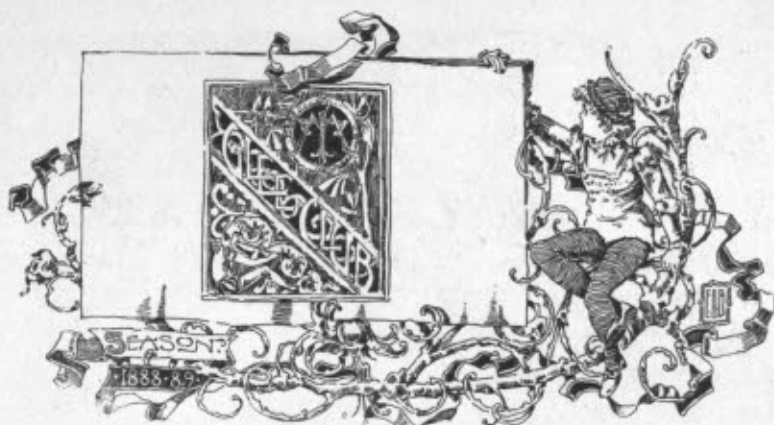
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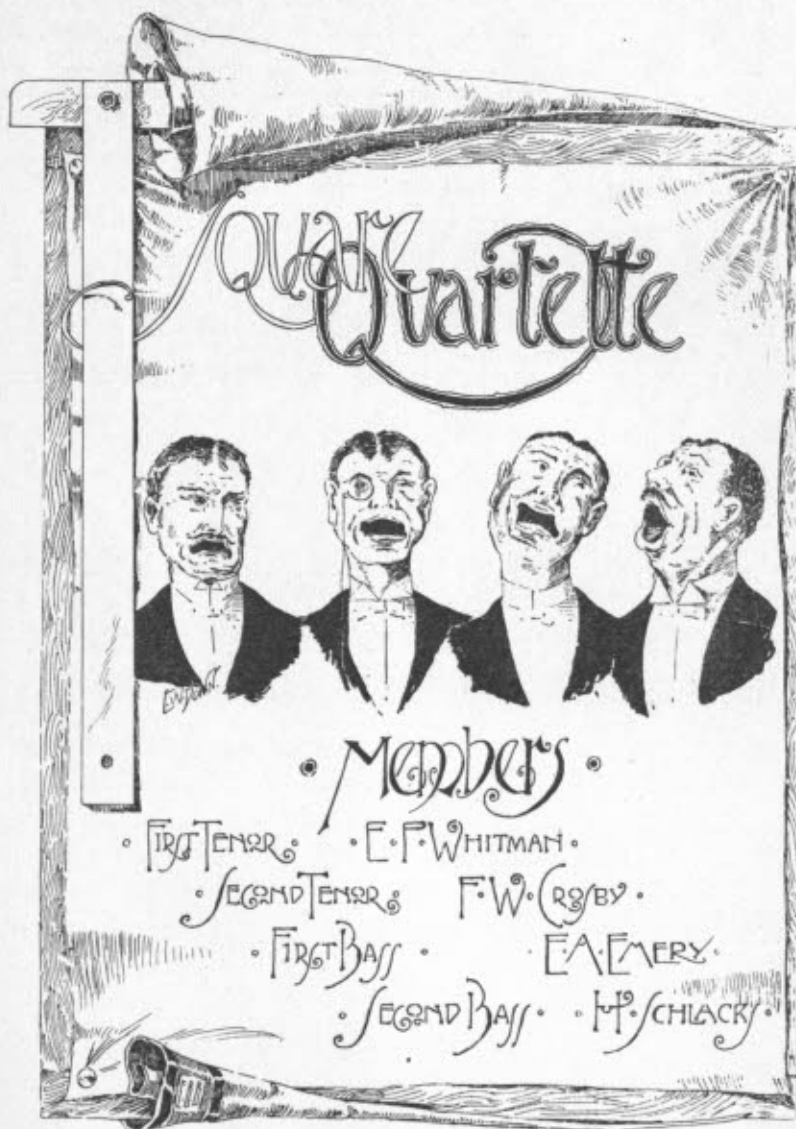
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# COTILLION HALL.

*Saturday, Dec. 1, 1888.*

*Tuesday, Jan. 1, 1889.*

*Saturday, Dec. 15, 1888.*

*Saturday, Feb. 9, 1889.*

*Saturday, Feb. 23, 1889.*

Manager.

G. U. G. HOLMAN.

Secretary and Treasurer.

C. W. PIKE.

Business Manager.

W. I. FINCH.

Committee.

W. I. FINCH, '90.

J. L. DAMON, '93.

J. A. CURTIN, '92.

E. M. A. MACHADO, '90.

A. H. ALLEY, '91.

F. I. DAVIS, '92.





## Number Six.

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WILLIAM LINCOLN HARRIS.

BENTON STURGES.

JOHN LANGDON BATCHELDER, Jr.

JOHN HENRY TOWNE.

CHARLES EDWARD RIPLEY.

RUSSELL ROBB.

FREDERIC TALLMADGE TOWNE.

FRANCIS GOODHUE, Jr.

THEODORE SPENCER.

WALTER POWER HENDERSON.

MORRIS AUSTIN PETERS.

MARVINE GORHAM.



# Roster M. J. T. C. C.

## FIELD AND STAFF.

Major.

GEORGE GUPPY.

Adjutant.

F. F. PHINNEY.

Quartermaster.

W. H. SAYWOOD, Jr.

Sergeant-Major.

W. A. CLAPP.

Drum-Sergeant.

MOTT SMITH.

Co. A.

Captain.

P. G. PARSONS.

First Lieutenant.

L. S. JAMES.

Second Lieutenant.

S. P. WALDRON.

Co. B.

Captain.

E. R. KIMBALL.

First Lieutenant.

F. B. KENDALL.

Second Lieutenant.

W. G. BARNES.

Co. C.

Captain.

FRANK HOUGHTON.

First Lieutenant.

W. S. FORBES.

Second Lieutenant.

J. C. CLAPP.

Co. D.

Captain.

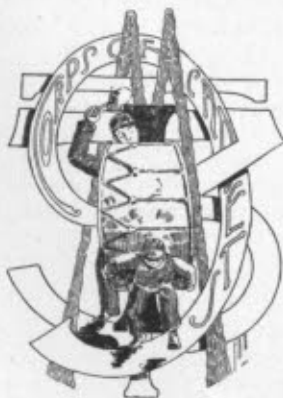
J. C. WADSWORTH.

First Lieutenant.

B. H. THOMAS.

Second Lieutenant.

H. M. BURT.



# Co-operative Society.

President,

WM. B. POLAND.

Vice-President,

B. H. MANN.

Secretary,

F. H. MESERVE.

Treasurer,

F. C. BLANCHARD.

Directors,

*From the Faculty* . . . . . PRES. FRANCIS A. WALKER.

*Honorary Director* . . . . . PROF. S. W. HOLMAN.

E. D. BROWN, '90.

J. SWAN, '91.

C. F. HAMMOND, '91.

C. F. PARK, '92.

THE Class of '87 had the honor of originating the Co-operative Society, through the efforts of Mr. Giles Taintor.

The Society was organized solely to promote the comfort and pecuniary interests of the students at the Institute. With this end in view the income is devoted to the support of the Co-operative Scholarship given each year to some member of the Society, and to various schemes by which the expenses of the school year may be lessened. A book exchange has been established, where members may buy or dispose of second-hand books at a fair price. The officers are at present endeavoring to start a lunch-room for the benefit of students living out of town, where, for a small sum of money, a good hot lunch can be procured. The Faculty have assured us of assistance in providing accommodations, etc.

Members receive discounts of ten per cent to twenty-five per cent, or even fifty per cent, on goods bought from members of the list of "affiliated tradesmen."

The officers of the Society are elected at the general meeting held on the 1st of April of each year. The services of the officers are entirely gratuitous.





1889-90.

# OFFICERS.

President.

EDGAR L. HAMILTON, '90.

Vice-President.

JOHN L. BATCHELDER, Jr., '90.

Secretary.

HENRY M. WAITE, '90.

Treasurer.

CHARLES HAYDEN, '90.

Executive Committee.

EDWARD B. STEARNS, '90.

HERBERT L. POTTER, '92.

WILLIAM C. DART, '91.

FREDERICK W. LORD, '93.

## Eighth Indoor Winter Meeting.

Saturday, Dec. 22, 1888.

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<i>Putting Shot</i>	. . . . . 35 ft. 4½ in. (Record)	. . . J. C. E. DE BULLET, '90.
<i>Standing High Jump</i>	. . . . . 4 ft. 6½ in.	. . . . . L. C. WASON, '90.
<i>Running High Kick</i>	. . . . . 9 ft. 1 in.	. . . . . L. C. WASON, '90.
<i>Fence Vault (Handicap)</i>	. . . . . 6 ft. 6¼ in. (+ 3¼ in.)	. . . J. C. E. DE BULLET, '90.
<i>Running High Jump</i>	. . . . . 5 ft. 4½ in.	. . . . . R. W. CONANT, '91.
<i>Feather-weight Sparring</i>	. . . . .	. . . J. L. BATCHELDER, Jr., '90.
<i>Light-weight Sparring</i>	. . . . .	. . . B. F. WILSON, '89.
<i>Tug-of-War</i>	. . . . .	. . . CLASS OF '89.

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### SUMMARY.

'89 won	. . . . . 3 events.
'90 won	. . . . . 5 events.
'91 won	. . . . . 1 event.
'92 won	. . . . . 1 event.

## Eleventh Annual Open Spring Meeting.

Saturday, March 2, 1889.

OPEN TO HARVARD ATHLETIC ASSOCIATION AND BOSTON  
ATHLETIC CLUB.

<i>Fence Vault (Handicap)</i>	6 ft. 9 $\frac{1}{4}$ in. (+ 2 $\frac{1}{2}$ )	G. B. MORRISON, B. A. A.
<i>Standing High Jump</i>	4 ft. 6 $\frac{1}{2}$ in.	L. C. WASON, M. I. T. '90.
<i>Putting Shot</i>	36 ft. 2 $\frac{1}{4}$ in.	J. C. E. DE BULLET, M. I. T. '90.
<i>Running High Jump</i>	5 ft. 5 $\frac{1}{2}$ in.	J. P. LEE, H. A. A.
<i>Running High Kick</i>	9 ft. 2 in.	L. C. WASON, M. I. T. '90.
<i>Tug-of-War (Harvard '92-M. I. T. '92)</i>		M. I. T. '92.
<i>Heavy-weight Sparring</i>		F. G. CURTIS, H. A. A.
<i>Feather-weight Sparring</i>		P. MARQUAND, H. A. A.
<i>Light-weight Sparring</i>		F. CABOT, Jr., H. A. A.
<i>Tug-of-War (Harvard '91-M. I. T. '92)</i>		HARVARD, '91.

## Outdoor Spring Meeting.

Readville, May 4, 1889.

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<i>100-Yards Dash</i>	11 s.	C. E. BUCHHOLZ, '92.
<i>Half-Mile Run</i>	2 m. 12½ s. (Record)	J. L. BATCHELDER, Jr., '90.
<i>Bicycle Race (1 mile)</i>	3 m. 34½ s.	WEBSTER, M. A.
<i>220-Yards Run</i>	25¾ s.	C. E. BUCHHOLZ, '92.
<i>One-Mile Walk</i>	8 m. 27½ s.	A. H. ALLEY, '91.
<i>440-Yards Run</i>	58½ s.	F. L. DAME, '89.
<i>Standing Broad Jump</i>	9 ft. 3 in.	L. C. WASON, '90.
<i>One-Mile Run</i>	5 m. 3½ s. (Record)	E. L. ANDREWS, '92
<i>Two-Mile Bicycle Race</i>	8 m. 7½ s.	WEBSTER, M. A.
<i>Running Broad Jump</i>	15 ft. 8½ in.	L. C. WASON, '90.

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'89 won 1 first and 3 seconds = 5 points.

'90 " 3 " " 2 " = 8 "

'91 " 1 " " 3 " = 5 "

'92 " 3 " " = 6 "





## Institute Records.

<i>100-Yards Run</i> . . . . .	10 $\frac{3}{8}$ s. . . . .	F. R. YOUNG, '86.
<i>200-Yards Run</i> . . . . .	24 $\frac{1}{2}$ s. . . . .	F. L. PIERCE, '89.
<i>Quarter-Mile Run</i> . . . . .	58 $\frac{3}{5}$ s. . . . .	L. R. COBB, '86.
<i>Half-Mile Run</i> . . . . .	2 m. 12 $\frac{1}{2}$ s. . . . .	J. L. BATCHELDER, Jr., '90.
<i>One-Mile Run</i> . . . . .	5 m. 3 $\frac{2}{5}$ s. . . . .	E. L. ANDREWS, '92.
<i>120-Yards Hurdle</i> . . . . .	19 $\frac{2}{5}$ s. . . . .	S. STURGIS, '87.
<i>One-Mile Walk</i> . . . . .	8 m. 16 s. . . . .	J. DUFF, '81.
<i>Two-Mile Bicycle Race</i> . . . . .	6 m. 40 $\frac{1}{4}$ s. . . . .	C. H. WARNER, '89.
<i>Running High Jump</i> . . . . .	5 ft. 6 in. . . . .	G. L. HEINS, '82.
		J. L. KIMBALL, '87.
<i>Standing High Jump</i> . . . . .	4 ft. 10 in. . . . .	F. R. YOUNG, '86.
<i>Running Broad Jump</i> . . . . .	17 ft. 4 $\frac{1}{2}$ in. . . . .	M. E. COBB, '87.
<i>Standing Broad Jump</i> . . . . .	9 ft. 7 in. . . . .	L. C. WASON, '90.
<i>Running High Kick</i> . . . . .	9 ft. 2 in. . . . .	L. C. WASON, '90.
<i>Fence Vault</i> . . . . .	7 ft. 2 in. . . . .	W. F. RIPLEY, '82.
<i>Pole Vault</i> . . . . .	9 ft. 4 in. . . . .	F. T. STURGIS, '84.
<i>Putting the Shot (16 lbs.)</i> . . . . .	36 ft. 2 $\frac{1}{4}$ in. . . . .	J. C. E. DE BULLET, '90.

# Collegiate Records

To November 1, 1889.

"A collegiate record is one made by a collegian in any amateur games to which the I. C. A. A. A. gives its approval."

100-Yards Run . . . . .	10 s. . . . .	{ E. J. WENDELL . . . . . Harvard.
		{ WENDELL BAKER . . . . . Harvard.
220-Yards Run . . . . .	22 s. . . . .	WENDELL BAKER . . . . . Harvard.
440-Yards Run . . . . .	47 $\frac{3}{4}$ s. . . . .	WENDELL BAKER . . . . . Harvard.
Half-Mile Run . . . . .	1 m. 56 $\frac{1}{8}$ s. . . . .	W. H. GOODWIN, Jr. . . . . Harvard.
One-Mile Run . . . . .	4 m. 29 $\frac{1}{2}$ s. . . . .	C. O. WELLS . . . . . Amherst.
120-Yards Hurdle . . . . .	16 $\frac{3}{8}$ s. . . . .	BERGER . . . . . Yale.
220-Yards Hurdle . . . . .	26 $\frac{3}{8}$ s. . . . .	H. MAPES . . . . . Columbia.
One-Mile Walk . . . . .	6 m. 59 $\frac{1}{2}$ s. . . . .	H. H. BEMIS . . . . . Harvard.
Putting Shot (15 lbs.) . . . . .	40 ft. 9 $\frac{1}{2}$ in. . . . .	A. B. COXE . . . . . Yale.
Throwing Hammer (16 lbs.) . . . . .	101 ft. 1 $\frac{1}{2}$ in. . . . .	A. B. COXE . . . . . Yale.
Two-Mile Bicycle Race . . . . .	5 m. 43 s. . . . .	HAMILTON . . . . . Yale.
Pole Vault . . . . .	10 ft. 7 $\frac{3}{4}$ in. . . . .	L. D. GODSHALL . . . . . Lafayette.
Fence Vault . . . . .	7 ft. 3 $\frac{3}{4}$ in. . . . .	C. H. ATKINSON . . . . . Harvard.
Running High Jump . . . . .	6 ft. 1 $\frac{1}{4}$ in. . . . .	W. B. PAGE . . . . . Univ. of Penn.
Running Broad Jump . . . . .	22 ft. 6 in. . . . .	T. G. SHERMAN . . . . . Yale.
Standing High Jump . . . . .	5 ft. 1 $\frac{1}{4}$ in. . . . .	W. SOREN . . . . . Harvard.

# Intercollegiate Records

To November 1, 1889.

*"An intercollegiate record is any record made at the annual meeting of the I. C. A. A. A. A."*

100-Yards Run . . . . .	10 $\frac{1}{8}$ s. . . . .	H. S. BROOKS . . . . .	Yale.
220-Yards Run . . . . .	22 $\frac{3}{8}$ s. . . . .	W. BAKER. . . . .	Harvard.
440-Yards Run . . . . .	50 s. . . . .	W. C. DOHM. . . . .	Princeton.
Half-Mile Run . . . . .	2 m. 2 s. . . . .	W. H. GOODWIN, Jr. . . . .	Harvard.
One-Mile Run . . . . .	4 m. 29 $\frac{1}{8}$ s. . . . .	C. O. WELLS. . . . .	Amherst.
120-Yards Hurdle . . . . .	16 $\frac{1}{8}$ s. . . . .	H. MAPES . . . . .	Columbia.
220-Yards Hurdle . . . . .	26 $\frac{3}{8}$ s. . . . .	H. MAPES . . . . .	Columbia.
One-Mile Walk . . . . .	7 m. 6 $\frac{1}{8}$ s. . . . .	T. MCILVAINE . . . . .	Columbia.
Putting Shot (16 lbs.) . . . . .	40 ft. 9 $\frac{1}{2}$ in. . . . .	A. B. COXE . . . . .	Yale.
Throwing Hammer (16 lbs.) . . . . .	98 ft. 6 in. . . . .	A. B. COXE . . . . .	Yale.
Two-Mile Bicycle Race . . . . .	6 m. $\frac{4}{5}$ s. . . . .	R. H. DAVIS . . . . .	Harvard.
Pole Vault . . . . .	10 ft. 5 $\frac{1}{2}$ in. . . . .	R. G. LEAVITT . . . . .	Harvard.
Running High Jump . . . . .	5 ft. 11 $\frac{1}{4}$ in. . . . .	W. B. PAGE . . . . .	Univ. of Penn.
Running Broad Jump . . . . .	22 ft. 6 in. . . . .	T. G. SHERMAN . . . . .	Yale.



## Football Association.

1889.

---

President.

EDGAR L. HAMILTON, '90.

Vice-President.

CHARLES F. HAMMOND, '91.

Secretary and Treasurer.

CHARLES HAYDEN, '90.

Manager.

HENRY M. WAITE, '90.

Executive Committee.

CHARLES E. RIPLEY, '90.

HERBERT S. POTTER, '92.

GEORGE W. VAILLANT, '91.

FREDERICK W. LORD, '93.

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1890.

President.

C. F. HAMMOND, '91.

Vice-Presidents.

G. W. VAILLANT, '91.

F. H. HARVEY, '92.

Secretary and Treasurer.

S. W. WEIS, '92.

Manager.

H. N. WILLIAMS, '92.

Executive Committee.

H. RICE, '91.

E. P. GILL, '92.

R. H. BEATTIE, '93.



1889.

Captain.

O. GERMER, Jr.

Rushers.

KALES, '92	Ends	VORCE, '93.
WEIS, '92	Tackles	BEATTIE, '93.
HARVEY, '92	Guards	HIGHLANDS, '91.

HAMMOND, '91 (*Centre*).

Quarter-back.

NOBLIT, '93.

Half-backs.

WAITE, '90.

GERMER, '91.

Full-back.

SLADE, '92.

Substitutes.

ANDREWS, POTTER, LORD, YOERG, NILSON, FOSS.

## SUMMARY OF GAMES FOR 1889.

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1. Andover, Mass., Oct. 9. — Phillips Andover vs. Technology.

Rushers: WEIS, YOERG, HARVEY, HAMMOND, BAKER, BEATTIE, LORD.  
Quarter-back: KALES. Half-backs: GERMER, GARRISON (WARDNER).  
Full-back: VORCE. Score: ANDOVER, 4; TECHNOLOGY, 0.

2. Exeter, N. H., Oct. 12. — Phillips Exeter vs. Technology.

Rushers: LORD, POTTER, YOERG, NILSON, TAINTOR, BEATTIE, ANDREWS. Quarter-back: KALES. Half-backs: WAITE, WEIS. Full-back: VORCE. Score: EXETER, 14; TECHNOLOGY, 0.

3. Cambridge, Oct. 16. — Harvard vs. Technology.

Rushers: ANDREWS, POTTER, YOERG, HAMMOND, NILSON, BEATTIE, KALES. Quarter-back: NOBLIT. Half-backs: WAITE, GARRISON. Full-back: VORCE. Score: HARVARD, 62; TECHNOLOGY, 0.

4. Boston, Oct. 19. — Brown University vs. Technology.

Rushers: POTTER, BEATTIE, YOERG, HAMMOND, HIGHLANDS, HARVEY, ANDREWS. Quarter-back: NOBLIT. Half-backs: WAITE, WEIS. Full-back: SLADE. Score: TECHNOLOGY, 48; BROWN, 0.

\* 5. Amherst, Mass., Oct. 26. — Amherst vs. Technology.

Rushers: ANDREWS, POTTER, YOERG, HAMMOND, HIGHLANDS, BEATTIE, VORCE. Quarter-back: WEIS. Half-backs: GERMER, WAITE. Full-back: SLADE. Score: TECHNOLOGY, 10; AMHERST, 9.

Umpire and referee: KELLEY, Harvard Medical.

\* Championship game.

## TECHNIQUE.

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**\* 6. Boston, Nov. 2. — Dartmouth vs. Technology.**

Rushers: KALES, WEIS, HARVEY, RICE, HIGHLANDS, BEATTIE, VORCE.  
Quarter-back: NOBLIT. Half-backs: GERMER, WAITE. Full-back: SLADE.  
Score: DARTMOUTH, 42; TECHNOLOGY, 6.

Referee: KELLEY, Harvard Medical. Umpire: MORGAN, Trinity.

**\* 7. Boston, Nov. 9. — Stevens Institute vs. Technology.**

Rushers: KALES, WEIS, HARVEY, HAMMOND, HIGHLANDS, BEATTIE, VORCE. Quarter-back: NOBLIT. Half-backs: GERMER, FOSS. Full-back: SLADE. Score: TECHNOLOGY, 16; STEVENS, 10.

Referee, BROOKS, Harvard Medical. Umpire: MORGAN, Trinity.

**\* 8. Williamstown, Mass., Nov. 16. — Williams vs. Technology.**

Rushers: KALES, WEIS, HARVEY, HAMMOND, HIGHLANDS, BEATTIE, VORCE. Quarter-back: NOBLIT. Half-backs: GERMER, FOSS. Full-back: SLADE. Score: WILLIAMS, 18; TECHNOLOGY, 6.

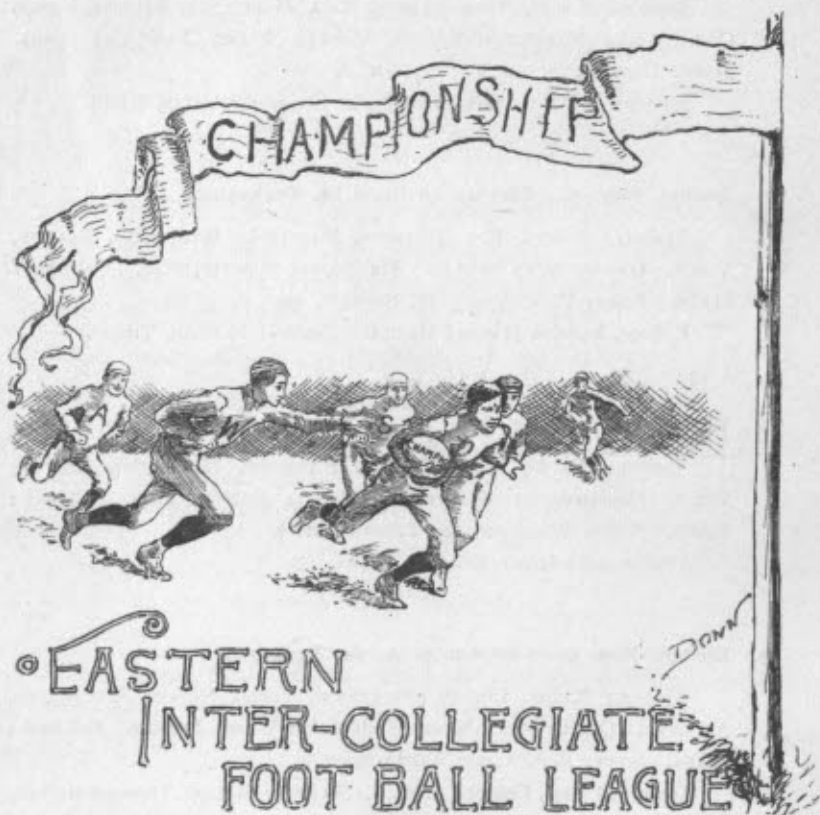
Umpire and referee: MORGAN, Trinity.

**9. Boston, Nov. 30. — Boston A. A. vs. Technology.**

Rushers: KALES, LINDER, NICKERSON, YOERG, NILSON, BATCHELDER, ANDREWS. Quarter-back: WEIS. Half-backs: WAITE, ROBERT. Full-back: SLADE. Score: B. A. A., 22; TECHNOLOGY, 0.

Umpire: CABOT, Harvard Medical. Referee: KELLEY, Harvard Medical.

\* Championship games.



#### OFFICERS.

President.

F. W. LAKEMAN, of Dartmouth.

Vice-President.

H. C. CROCKER, of Amherst.

Secretary.

E. CHILDS, of Williams.

Treasurer.

J. A. DEKOIT, of Stevens.



## CHAMPIONSHIP GAMES FOR 1889.

AMHERST . . . . .	9	TECHNOLOGY . . . . .	6	Amherst, Oct. 26.
DARTMOUTH . . . . .	60	AMHERST . . . . .	6	Hanover, Oct. 30.
DARTMOUTH . . . . .	42	TECHNOLOGY . . . . .	6	Boston, Nov. 2.
AMHERST . . . . .	10	WILLIAMS . . . . .	10	Amherst, Nov. 9.
TECHNOLOGY . . . . .	16	STEVENS . . . . .	10	Boston, Nov. 9.
WILLIAMS . . . . .	18	TECHNOLOGY . . . . .	6	Williamstown, Nov. 16.
AMHERST . . . . .	12	STEVENS . . . . .	5	Hoboken, Nov. 20.
DARTMOUTH . . . . .	20	WILLIAMS . . . . .	9	Springfield, Nov. 23.
STEVENS . . . . .		WILLIAMS.*		
DARTMOUTH . . . . .	18	STEVENS . . . . .	5	Hoboken, Nov. 27.

\* Forfeited.

TEAMS.	Games Won.	Games Tied.	Games Lost.	Points Scored.	Points Scored Against.
DARTMOUTH . . . . .	4	0	0	140	26
AMHERST . . . . .	2	1	1	37	85
WILLIAMS . . . . .	1	1	2	37	36
TECHNOLOGY . . . . .	1	0	3	34	79
STEVENS . . . . .	1	0	3	20	46

## '92 Eleven.

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Rushers.		
KALES . . . . .	<i>Ends</i> . . . . .	POTTER ( <i>Captain</i> ).
ANDREWS . . . . .	<i>Tackles</i> . . . . .	LINDER.
HARVEY . . . . .	<i>Guaras</i> . . . . .	YOERG.
NILSON ( <i>Centre</i> ).		

Quarter-back.  
WALKER.

WEIS.

Half-backs.

WARDNER.

Full-back.  
SLADE.

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ENGLISH HIGH SCHOOL vs. '92 . . . . .	4-18
'93 vs. '92 . . . . .	0-8

## '93 Eleven.

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Rushers.		
VORCE . . . . .	<i>Ends</i> . . . . .	BEDALL.
BEATTIE ( <i>Captain</i> ) . . . . .	<i>Tackles</i> . . . . .	SIMONS.
BATCHELDER . . . . .	<i>Guards</i> . . . . .	HEYWOOD.
TAINTOR ( <i>Centre</i> ).		

Quarter-back.  
GODCHAUX.

NOBLIT.

Half-backs.

FOSS.

Full-back.  
CUTLER.

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ENGLISH SCHOOL vs. '93 . . . . .	0-0
BOSTON LATIN SCHOOL vs. '93 . . . . .	11-10
'93 vs. '93. . . . .	8-0

## '91 Mechanicals.

Rushers.		
CLARK . . . . .	<i>Ends</i> . . . . .	JACOBS.
BLANCHARD . . . . .	<i>Tackles</i> . . . . .	HOWARD.
HOOPER . . . . .	<i>Guards</i> . . . . .	KENT.
RICE ( <i>Centre</i> ).		

Quarter-back,  
CAMPBELL.

Half-backs.	
RICHARDSON.	YOUNG.
Full-back.	
CHASE.	

ENGLISH HIGH SCHOOL vs. MECHANICALS . . . . .	6-0
ELECTRICALS vs. MECHANICALS . . . . .	0-12

## '91 Electricals.

Rushers.		
OXFORD . . . . .	<i>Ends</i> . . . . .	BRADLEE.
SPENCER . . . . .	<i>Tackles</i> . . . . .	ENSWORTH.
GREER . . . . .	<i>Guards</i> . . . . .	CONANT.
WHITLEY ( <i>Centre</i> ).		

Quarter-back.  
CREDEN.

Half-backs.	
GARRISON.	VIELÉ.
Full-back.	
BRAINERD.	

CHEMICALS vs. ELECTRICALS . . . . .	0-0
MECHANICALS vs. ELECTRICALS . . . . .	12-0
ARCHITECTS vs. ELECTRICALS . . . . .	4-20
CIVILS vs. ELECTRICALS . . . . .	6-4

## Civils.

	Rushers.	
YOUNG . . . . .	<i>Ends</i> . . . . .	COGSWELL.
DILL . . . . .	<i>Tackles</i> . . . . .	COLLINS.
DUNHAM . . . . .	<i>Guards</i> . . . . .	LEE.
	PRATT ( <i>Centre</i> ).	

Quarter-back.  
VAILLANT.

HAMMOND.

Half-backs.

WEIS.

Full-back.  
STEARNS.

ELECTRICALS vs. CIVILS . . . . . 4-6

## Architects.

	Rushers.	
LITTLEFIELD . . . . .	<i>Ends</i> . . . . .	LEEMING.
PERRY . . . . .	<i>Tackles</i> . . . . .	JENKS.
SCHLACKS . . . . .	<i>Guards</i> . . . . .	PETERS.
	YEORG ( <i>Centre</i> ).	

Quarter-back.  
HOWE.

BATCHELDER.

Half-backs.

WARDNER.

Full-back.  
HENDERSON.

ELECTRICALS vs. ARCHITECTS . . . . . 20-4





*"What's in a name?"*

#### MEMBERS.

HARRY D. SHUTE, '92.

ROBERT K. BALL, '91.

JOHN C. E. DE BULLET, '90.

WILLIE YOUNGCHUTE, '92.

\* LEWIS P. CODY, '92.

#### HONORARIES.

ELISHA B. BIRD, '91.

JAMES SWAN, '91.

JOSEPH P. LYON, '92.

JOHN A. DEWOLF, '90.

#### CLUB PROPERTY.

Shooting-box at 913 Harrison Avenue.

Duck stand at Chelsea.

\* Second cousin of "Buffalo Bill."



Captain.

E. A. HOLMES.

Sub-Captain.

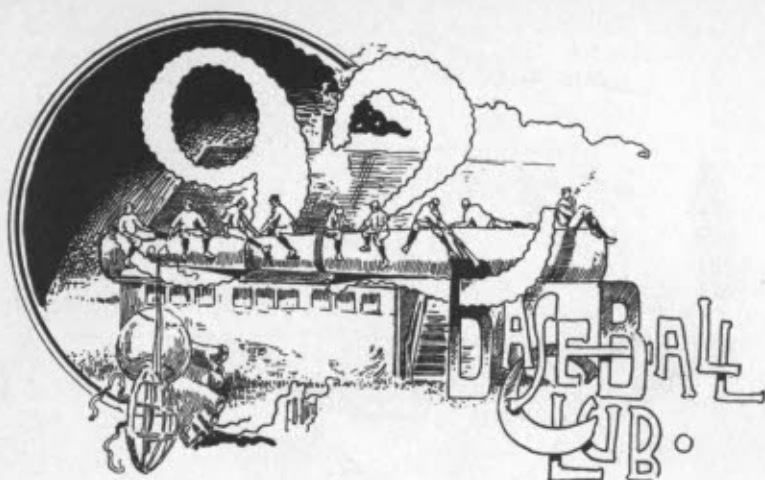
O. GERMER, Jr.

Manager.

F. S. VIELÉ.

## SUMMARY OF GAMES.

1. '91, 10; B. A. A., 9.  
SHELDON, c.; OXFORD, p.; PIERCE, 1st b.; HOLMES, 2d b.; DONLON, 3d b.;  
GERMER, s. s.; DUDLEY, l. f.; WHITLEY, c. f.; HIGHLANDS, r. f.
2. '91, 13; Harvard '92, 10.  
SHELDON, c.; OXFORD, p.; DUDLEY, 1st b.; HOLMES, 2d b.; DONLON, 3d b.;  
MANSFIELD, s. s.; GERMER, r. f.; WHITLEY, c. f.; HIGHLANDS, l. f.
3. Phillips Andover, 11; '91, 3.  
BORDEN, c.; HIGHLANDS, p.; PIERCE, 1st b.; HOLMES, 2d b.; GERMER, 3d b.;  
DONLON, s. s.; MANSFIELD, r. f.; DUDLEY, c. f.; OXFORD, l. f.
4. Tufts College, 10; '91, 8.  
BOLAN, c.; OXFORD, p.; HIGHLANDS, 1st b.; HOLMES, 2d b.; GERMER, 3d b.;  
DUDLEY, s. s.; MANSFIELD, r. f.; WHITLEY, c. f.; PIERCE, l. f.
5. Medford, 25; '91, 11.  
BOLAN, c.; OXFORD, p. and l. f.; HIGHLANDS, 1st b. and p.; HOLMES, 2d b.;  
GERMER, 3d b.; DUDLEY, s. s.; MANSFIELD, r. f.; WHITLEY, c. f. and  
1st b.; HASKINS, l. f.
6. '92, 24; '91, 7.  
BOLAN, c.; OXFORD, p.; WHITLEY, 1st b.; HOLMES, 2d b.; GERMER, 3d b.;  
DONLON, s. s.; MANSFIELD, r. f.; DUDLEY, c. f.; ENSWORTH, l. f.



Captain.

J. H. SLADE, Jr.

Manager.

H. N. WILLIAMS.

1. '92, 23; West Roxbury, 6.  
SLADE, c.; VANCE, p.; LOOK, 1st b.; LOCKE, 2d b.; WELLS, 3d b.;  
HUNTOON, s. s.; OBER, r. f.; HAWKINS, c. f.; YOERG, l. f.
2. '92, 9; B. A. A., 5.  
SLADE, c.; VANCE, p.; LOOK, 1st b.; HUNTOON, 2d b.; WELLS, 3d b.;  
WEBER, s. s.; YOERG, l. f.; OBER, r. f.; LOCKE, c. f.
3. '92, 15; Phillips Andover, 6.  
SLADE, c.; LOCKE, p.; LOOK, 1st b.; HUNTOON, 2d b.; WELLS, 3d b.;  
WEBER, s. s.; OBER, r. f.; SQUIRES, c. f.; YOERG, l. f.
4. '92, 7; Cliftons, 1.  
SLADE, c.; LOCKE, p.; LOOK, 1st b.; HUNTOON, 2d b.; PARISH, 3d b.;  
WEBER, s. s.; YOERG, r. f.; OBER, c. f.; HAWKINS, l. f.
5. '92, 8; Marions, 2.  
SLADE, c.; LOCKE, p.; LOOK, 1st b.; HUNTOON, 2d b.; PARISH, 3d b.;  
PFAFFMAN, s. s.; GODCHAUX, r. f.; OBER, c. f.; YOERG, l. f.
6. '92, 13; Phillips Exeter, 8.  
SLADE, c.; VANCE, p.; LOOK, 1st b.; HUNTOON, 2d b.; PARISH, 3d b.;  
PETTEE, s. s.; OBER, r. f.; LOCKE, c. f.; YOERG, l. f.
7. Tufts College, 20; '92, 7.  
SLADE, c.; VANCE, p.; LOOK, 1st b.; LOCKE, 2d b.; PARISH, 3d b.;  
PETTEE, s. s.; OBER, r. f.; HUNTOON, c. f.; YOERG, l. f.
8. '92, 24; '91, 7.  
SLADE, c.; VANCE, p., c. f.; LOOK, 1st b.; LOCKE, 2d b., p.; PARISH, 3d b.;  
PETTEE, s. s.; OBER, r. f.; HUNTOON, c. f., 2d b.; YOERG, l. f.



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## TOURNAMENT.

### SINGLES.

Won by . . . . . G. S. KEYES, '92.

### DOUBLES.

Won by . . . . . D. A. CATER, '91, and H. C. FORBES, '91.





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# M.I.T. BICYCLE CLUB



## Road Race.

April 22, 1889.

### REFEREES.

For Harvard.

R. H. DAVIS.

For Technology.

CHARLES HAYDEN.

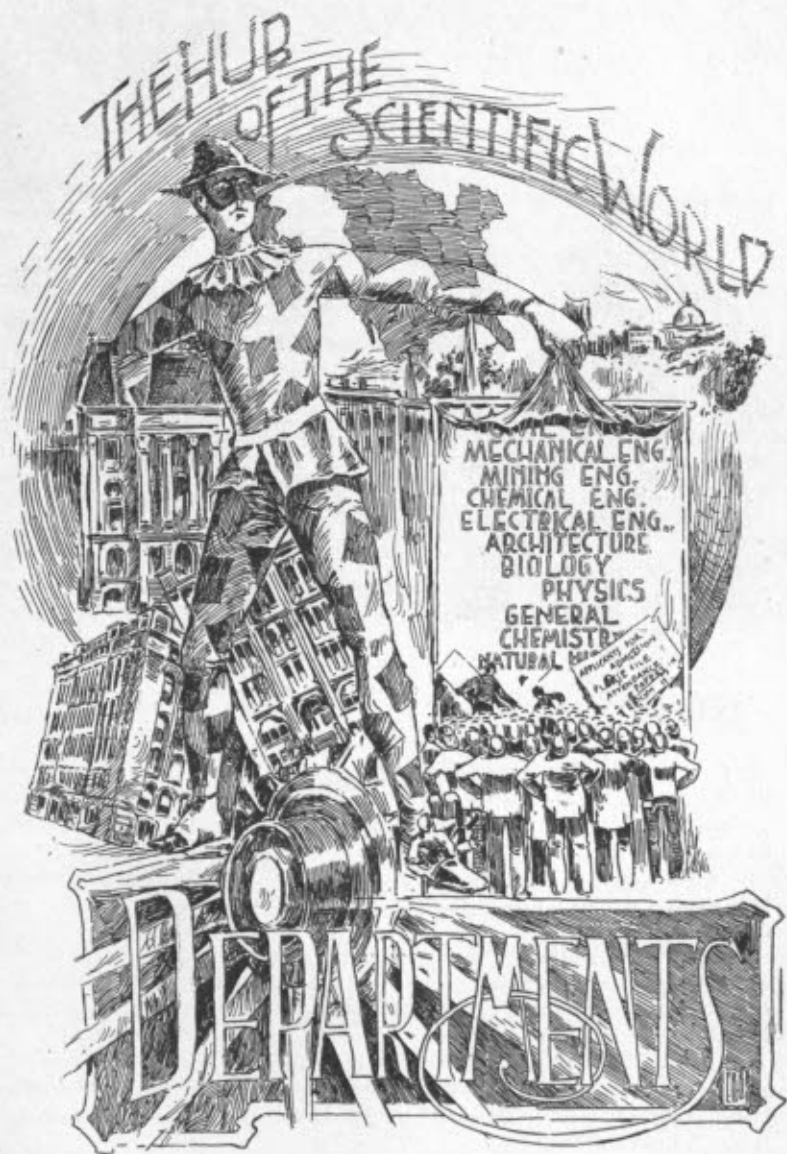
*Course, fifteen miles.*

The finish was as follows:—

1. GREENLEAF . . . . . Harvard.	7. HADLEY . . . . . Technology.
2. NORTON . . . . . Technology.	8. BARRON . . . . . Harvard.
3. BAILEY . . . . . Harvard.	9. ROOTS . . . . . Technology.
4. BROWN . . . . . Harvard.	10. WASON . . . . . Technology.
5. BRADLEY . . . . . Technology.	11. WEBSTER . . . . . Technology.
6. WARNER . . . . . Technology.	12. HOLMES . . . . . Harvard.

Harvard, 29 points; Technology, 26 points.

Greenleaf finished in 57 min. 31 $\frac{3}{4}$  sec., and Norton in 57 min. 31 $\frac{1}{2}$  sec.



## COURSE I.



THE above heading recalls to my mind the reply once made to my inquiry concerning a friend at the Tech.: "What is he? Civil?" The response was, "Well, usually."

It is needless to say that the same could be said with equal truth of all the students in Course I.; and I may add that no other complimentary remarks would be misapplied when bestowed on those men who, whether setting up a transit or pulling the sag out of a chain, manifest that intelligence and zeal which will doubtless enable them to institute hereafter a new era in civil engineering.

The distinguishing characteristics exhibited at Tech. by the Civils are: first, their disposition to stand up for their rights, and to kick at more than a page and a half of German per day; secondly, their gallantry towards young ladies, as is shown by the way that they reprimanded a certain one of their number, who sometimes, while going down to Quincy, cast bold glances at the girls in the train.

Quincy, by the way, deserves more than a mere mention, or at least my fellow-students must think so. It is a strictly no-license town, carefully selected by our professor as such, the other motive which actuated him being to get a favorable site for a railroad.

It is favorable in that it presents all sorts of difficulties in the way of woods, hills, streams, and bogs, thus teaching us perseverance and making us tough and rugged.

Friday with us bears out its reputation of being unlucky, as it is the day on which we go to Quincy, where, after getting through work, we resort to our only source of amusement, that of gazing at the young ladies around the station, at whom, however, with our usual delicacy, we look from afar, through the transit or level.

One portion of our work at Quincy is done with great judgment and accuracy, and that is the topography. An ex-topographer once said to me, "When they try to join those different contours together there'll be sport." Having since had a hand at it myself, I can agree with him.

The desirable position in our railroad work seems to be that of the "back-flagman," who, while waiting three quarters of an hour for the other man to set up his transit, may go to sleep or read a novel, as instanced by the fact that one man with literary tastes perused an entire *Town Topics* while filling this irksome position.

As to our other professional duties, we have interesting work with the stadia about twice a week, unless it rains, when we wield pencil and straight-edge in our spacious and elegant drawing room.

We also draw problems in Stereotomy, in which our limit of accuracy is approximately the square root of half a hair's breadth.

The Civils revel in Literature and Economic History, especially the latter, the course in which consists in cramming down our throats long seven-figured numbers relating to exports and imports.

One curious fact in regard to Literature is, that there was a remarkable similarity in the subjects for our first theme; every man wrote on the subject, "Why I came to Tech." This, however, is a subject which gives scope to the imagination, and gives one a chance to tell about his lofty ambition, and as the Civils have plenty of the latter, the subject doubtless was handled in their usual masterly style.

Concerning the personal characteristics of the students of Course I., I may say here that the class is, as every class must be, divided in this respect into two parts, one of which is composed of those studious, hard-working men who burn midnight oil, the other comprising those unambitious youths who would cut a hundred recitations rather than miss a foot-ball game, and who prefer going to the theatre to toiling over tedious examples in the Integral Calculus or long railroad problems.

These same students, who, I am happy to say, form a small minority of the class, are distinguished by their joviality and humor, also by their being about four plates behind in drawing.

However, in spite of these few pleasure-seekers, the class, as a whole, has made and still preserves a reputation of being conscientious and industrious, and if the men in Course I. show in after life that aptitude for and interest in their work which the majority of the class have manifested already, we feel assured that their record will bring no discredit on the grand institution from which, before long, they will issue fully equipped to enter upon their life's work.





## COURSE II.



THE present chronicler of Course II. has had somewhat of an advantage over his predecessors, in having been able to study the interior workings of the Mechanical Engineering Department, together with the personalities and frivolities of some of its members, from an altogether novel and unexpected stand-point.

Being engaged one evening in looking through some of the unpublished works of the late Jacob Abbott, I found, to my pleasure and surprise, a manuscript entitled "Rollo at Tech." On reading this through, I found that it contained a long and interesting description of what this world-renowned personage saw and heard while on a visit to the Massachusetts Institute of Technology, and forthwith set myself to work to copy out such passages as might please the editors of *TECHNIQUE*, and the public in general.

It appears that Rollo's uncle George was about to start a cider mill, and before setting up the machinery, resolved

to seek the advice of a friend of his, who was a professor of engineering at the Institute.

One bright morning in November, Rollo, accompanied by Jonas, boarded the train at the Pumpkintown station. In due time they alighted at Huntington Avenue, and immediately proceeded to the transaction of the business with which Mr. Holliday had intrusted them.

It appears that Jonas had formerly been a Tech. student, so the boys succeeded in getting to their destination without loss of time. As they were passing by a large stone edifice, which looked like a church they saw a peculiar-looking man gazing into a hole, from which steam and bricks were issuing with considerable force, — his face wearing a strange expression of be-





wilderment and disgust. "That is the professor to whom we are to give your uncle's letter," said Jonas; but as the professor seemed to be very much absorbed, they did not venture to speak to him then, but continued on their way. Just before arriving at the end of their walk, Rollo noticed an ivy-covered doorway on the opposite side of the street. He asked Jonas about it. "It is the abode of sin and wickedness," said Jonas; "your mother would not wish you to go there." "Who does go there?" asked Rollo, immediately becoming interested. He could not quite understand Jonas's reply, but made out the words "Civils" and "Generals." Though Rollo did not know what this meant, he did not inquire further, as he had been told that it was impolite to ask too many questions.

Arriving at the Institute, they went in, and after climbing several flights of stairs, came to a door over which was the number 43. They went in at this door, and found themselves in a large room, in which were a great many boys, some drawing, and others eating lunches. Rollo walked around among the different groups, and listened to the conversation that was going on. The first group consisted of a man and several boys. Rollo did not understand what they were talking about, but he heard the man say, excitedly, "That man was older than I was, but he was wrong, and I told him so!" Passing along, Rollo came to a young man who was sitting on a high stool and talking to the drawing board in front of him in a most profane manner. "Who is that?" he inquired. "Oh, that's a Soph. trying to do Descrip," was the reply.

He next came to a rosy-cheeked, curly-headed youth, who was telling a story of a locomotive which burned hay, greatly to the edification of his hearers. "Are you a Mechanical?" asked Rollo. "Yarzza," replied the youth, with great complacency. Some of the other Mechanicals were drawing, and Rollo noticed that there were several persons who were continually coming from another part of the room to look at the drawings, and then returning to alter their own. Rollo was told that these were Electricals. In still another group the boys were rejoicing over the fact that they had made Fantail shoot off his mouth for three quarters of the recitation hour. "Does it hurt Fantail to shoot off his mouth?" inquired Rollo of a boy who was trying to exchange some pickles for a piece of pie. "Oh, no," said the boy; "he likes to do it very much."

Rollo would have enjoyed staying longer, but just then Jonas called to him that it was time to go for their train, and he left, fully convinced that Course II. was the course he should take, if ever he came to Tech.



### COURSE III.



Who does not know us? We need no description. Gaze at us among the crowd of chemists in the laboratory, and how marked is the line that separates us from the common herd!

Who can grasp an ignition-tube by the hot end with such perfect grace and abandon as a Miner? Who can explode a titration flask with such a beatific smile or calm equanimity as a Miner? None.

A visitor in the laboratory was heard to inquire, "Who is that youth of lordly mien and sandy mustache who has just spilled his silica determination with the prayer for his future state, 'May I be d—d'?" 'T is he, the sole discoverer of

the Hamiltonian period of the Devonian age of the Paleozoic Era who goes forth with "Roxy" to the Winter Hill quarries, and, scorning to tread in the tracks of others, picks his own way among the remains of a not prehistoric past. Over the "offal" consequences of his independence we draw the veil.

The question, "Where are the Miners in athletics?" is never heard. No. How could we descend from the sublime to the ridiculous, from the contemplation of the good, the true, and the beautiful in the mellow light of a white-hot furnace, to mix with the *canaille* of the other courses on the foot-ball field! No! for the result would be too fatal to our sensitive organizations.

With what care and fatherly protection have the Faculty guided our footsteps, selecting the grain from the chaff, until now, in the third year of our life, they present us, hand-picked and assorted, to the admiring world.

It was with deep regret that we lost one of our members of last year, B—rn—s, who is now working the transit racket on the untutored cow-boys of Texas. It is also with feeling that we chronicle the fall of one of our number, Billy W., from the ranks of honest toil to "civil" life.

We have, even at this early date, made our mark in the scientific world, for to us alone belongs the honor of making the Calcium Carbonate Fly, to be seen only in Rogers 27.



Upon entering this, our Junior year, we had fondly hoped that the dead past would bury its dead, and that we were through forever with one of the forms of torture that harrow the souls of the Soph. and the Fresh., but it was not to be. The bull of the Theoretical Pope went forth, and from the grave to which we had consigned it rose the form of that dead spectre, intermediate exams.

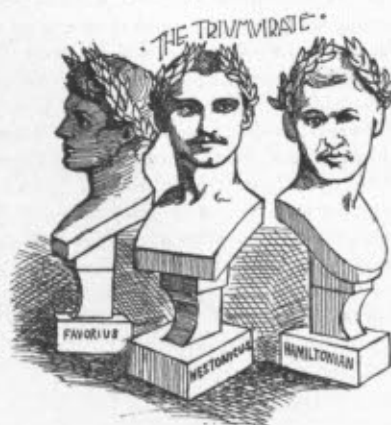
One memorable day we stole time from our duties to penetrate the mysterious depths of the mining lab. to try and form some idea of our Senior year. At first we stood only at the threshold and gazed into that dim Inferno, thick with smoke and rank with the smell of sulphur, which could not have owed its origin solely to the roasting furnaces, judging from certain classic phrases that greeted our ears.

After a time, gaining courage, we entered and beheld strange sights. The figures about us bore the semblance of men, but seemed more like creatures of the carboniferous age. They worked as if governed by fixed laws. One figure was seated cross-legged on a table, turning with tireless arm an iron crank, while his eyes were fixed, steadfastly on the clock. We approached this strange being, and questioned him, but he did not notice us; with every turn of the crank, he repeated this senseless formula: "Grind for one hour, grind for one hour." Another was standing in front of a white-hot furnace, moving an iron rod backwards and forwards with ceaseless motion through a pan of dirt. He, too, would give us no reply, but repeated the same dismal chant with variations: "Stir for one hour, stir for one hour." With fear in our hearts we left these two unfortunates to work out their dreadful sentences.

In another room we found a group of men watching the slow revolutions of an iron drum. We paused a moment and gazed with wonder at the resigned expression of their faces; and from the whirl of the machinery, as from the speaking oak of Dodona came this oracular strain:—

Though the mercury mill grinds slowly,  
Yet it grinds exceeding small;  
If with patience you stand waiting,  
'T will amalgamate it all.

With foreboding hearts and shaking knees we made our escape, and going back to our desks, settled to our third-year work, with thankfulness in our hearts and these words on our lips, "Sufficient unto the day is the evil thereof."



## COURSE IV.



As we climb a gloomy flight of hob-nailed stairs, and draw near to the apartment consecrated to art and desecrated by the artists, a low humming can be heard, which it would be poetical, but untrue, to say came from the busy bees working within. On entering, the low humming changes to a confused roar of the voices of all nations, some of whose owners are busily employed doing nothing, while others are taking advantage of that pleasant proverb which says that "half a loaf is better than none."

A band of whistlers in one corner, most of whom are soloists, are trying to drown the notes emitted by a band of minstrels, who are keeping the air at their end of the room in a continual state of fear. To vary the sameness of these performances, there is heard, now and then, a floor-shaking and rhythmical stamping which announces to those not in the

ring that the leader of the Incurables has again warned his gang with the mystical "Are you all ready, fellows?"

Some of the infants or more youthful inhabitants of the place, so called because most of them have but partially completed their first year, are doing the orders which have been given to them, while others, who are more particular to have their work correct, are carefully executing them over again.

When the short winter afternoons come and well-ventilated gloom leaps in to destroy the eyesight, nearly all work is executed by electricity according to the new law. And while we are on this subject we may notice the fact that whereas in all well-conducted abattoirs the custom is to slaughter before rendering, the process here is reversed, and all work is rendered first and slaughtered afterwards.

To get more exercise and profit than is possible on the home grounds, the architects are sent, for two hours per week, to Boston's Twenty-five-cent Museum, where the inhabitants look down upon them in stony silence. In nowise daunted by this lack of sociability, the former walk up and down the halls provided for that purpose, and play at hide-and-seek with the instructor among the statues. This latter person performs the duties of judge, time-keeper, and black-marker of the game. With this brief respite of rest and recreation, sufficient strength is gained to stamp, sing, and whistle for another week in Room 21.

## TECHNIQUE.

"WHAT then have you done," the paymaster saith,

"That your salary now you should draw?"

The God of Fresh Air blew a very long breath,  
And replied with a h—m! and a haw:

"I've led them up chimneys, I've led them down flues,  
I've been with them through foul and through fair,  
And I've taught them the tricks of the nasal test  
On the *circumambient* air."

MUCH Ado about Nothing — The M. I. T. A. S.

If home is lonesome without a loggia or cam-  
panile, give us an order. — Two lady attendants  
for female clients.

A STILL hunt — The librarian.

"ORDER(s) is Heaven's first law." — E. B. H.

"BETTER late than never." — C. H. W.

"A SOFT, meek, patient, humble, tranquil  
spirit." — W. H. K.

"AND whistled as he went for lack of  
thought." — B. P. J.

"BEARS his blushing honors thick upon him."  
— E. V. S.

CUSTOMER AT M-C-L-CHL-N'S (*after pricing  
a number of articles*). — "Well, now, is there  
anything in this store that you dare to sell without  
the use of a 'net'?"

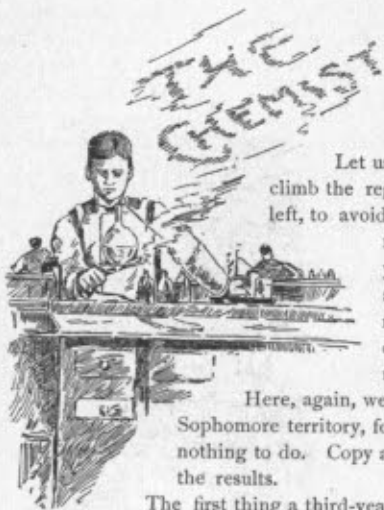
BY AND BY.

THE golden gates of heaven opened wide  
enough to let in a little man in a light ulster, who  
walked along the street as if in despair at some-  
thing undone or unaccomplished. When his tired  
feet refused to carry him any farther, he stepped  
up to one of the assistant angels, and remarked  
in a tired and tiny voice, "Good morning! Seen  
anything of Walker?"



Je suis M. Letang de Paris,  
Mon portrait vous voyez ici,  
Tout à fait rétablis  
Du corps et de l'esprit,  
Je reviendrai à l' M. I. T.

## COURSE V.



THE Chemical Department occupies the upper floor, and permeates the whole, of the new building. There is also, connected with it by the elevator, an Annex Inferno in the basement, of which more hereafter.

Let us first proceed directly to headquarters,—climb the regulation three flights of stairs, turn to our left, to avoid the Organic Lab., whose exhalations no man can survive who has not been three years a chemist; be careful not to get in among the Freshmen, for their actions and reactions are destructive to life and property; but, being sure we are right, go directly ahead and open the door to Room 45.

Here, again, we must be on our guard, and keep out of Sophomore territory, for with less than third-year men we have nothing to do. Copy after them, and it will be easy to calculate the results.

The first thing a third-year man does on re-entering the Lab. is to pay his last year's breakage bill, which extends his credit with Mrs. Stinson. The next thing, after securing his own desk, is to go through any unoccupied ones in the vicinity, and confiscate the apparatus which he finds in them. He is then ready to "make time." An approved method of doing this is to lay out a few dollars on a paper covered "Zeitschrift," and, obtaining the services of a man who is not too proud to work, to listen to his rendering of a few pages "*Ueber die Entstehung des Triammoniumphosphordodekamolybdansäure*," a subject on which every chemist should be well informed.

As we watch them carefully, we notice, what did not appear at first sight, that each of these chemists is doing something. That tall one, with the dow-ny sublimate on his lip, has undertaken to read the report of the Cronin trial, while evaporating a liter solution to dryness. By adding water, from time to time, he will easily accomplish the task. That light-haired analyst, who looks at the clock as often as he opens his eyes, did his day's work the night before, and is waiting for the English lecture, to get a little sleep. Our dark and dejected friend yonder sighs as he mixes his alcohol-ammonia cocktail. He is thinking of the next Geology excursion, and of helping the co-eds. over the fences.

And what is Deacon White doing? He is chasing the doctor around three rows of desks, to ask him if an acid solution is acid under all circumstances. Mr. H—rs—m, of Stoneham, is engaged on a profane special method for the recovery of iron in a broken beaker, and Alexander the Great is doing his work in advance, for the benefit of all who come after him. The rest of the assembly are shouting,



## TECHNIQUE.

"Hood! Hood!! Hood!!!" at that innocent young creature who "did n't think it smoked so."

"Such is life in the Analytical Laboratory."

Let us find the presiding genius of the place, and have him unlock the elevator (by special consent obtained by petitioning the Faculty). *Descendons à l'enfer*. The temperature rises as we go downward; the air becomes malodorous, sulphurous, chloriferous; we hear words in an outlandish tongue, our support trembles and stops; we fear the worst, and find ourselves in the Industrial Lab. The "whizzer," the "steamer," and the rest of the machines were making enough noise for a little pandemonium, and we paused a moment to collect our thoughts. Before we had collected any worth speaking of, the industrious William rolled a carboy of acid in our direction, and we "hustled." Across the room we saw a sign in Old English type. It read: "Drop a penny in the slot and get your Twaddell." But we had come at the wrong hour, and the apparatus would not work.

We then secured the services of a competent assistant, and endeavored to obtain some information, as follows:—

"What are those men boiling rags in iron stewpans?"

"They are textile colorists."

"Why?"

"Because they take the textile coloring option."

"What else do they do here?"

"Preparation work."

"Why is it called preparation work?"

"Because it is never completed."

"Do the men like their work?"

"Yes, they can't help it."

"What are these things hanging in the closet?"

"Samples. That is Mr. T-l-r's summer necktie, dyed chrome-blue; the eosine-pink one is a friendship ribbon belonging to Mr. C-ll-n's."

"What is that black yarn?"

"That is not black; it is turkey red, à la K-fm-nn."

"What is in those large porcelain dishes?"

"Those are crude products."

"Whose?"

"They belong to any one who is willing to own them."

At this moment an excited young man came along, and requested our informant to get him a bottle big enough to put some soda in, and the conversation was broken off.

We waited for some time, hoping to find some one else to enlighten us, but a student, whom we asked, said the only way was to "grab it quick"; and, as we did not understand this process, we were forced to abandon our search for more knowledge. We made our exit to the upper air without accident, leaving the Chemists to work out the rest of their sentence, as per tabular view.

## COURSE VI.



If you enter the large brick building at the corner of Boylston and Clarendon Streets, and walk down the right side of the corridor, you will come upon a room labelled 16; this is the home of Course VI. Here the Sophomore, delighted with his own wonderful knowledge, spends all his spare time and eats his lunch; in this place the overcoats of the more wealthy juniors are hung up, while those of their impecunious brethren are "hung up" elsewhere. Early in the morning we—the electricians of the coming era—gather ourselves together in this room, and then go over to the little one across the hall, where we learn what potential is and listen to the clatter in the room above us; "and those architects have very heavy feet, gentlemen" (as we well know). In that same room we learn about lines of force, but when we line up next afternoon, and endeavor to show the populace how the lines of force run when a charging electrical meets another body, we do not always have enough potential energy to get satisfactory results. So far, however, the difficulties have been entirely mechanical, and may be removed on further trial.

We have not waited to graduate before we made use of the scientific knowledge imbibed at the Institute; we have already demonstrated how much we have profited by our stay in Boston. Last April, as the crowd best qualified for the work, we supplied the class nine with a battery, and this year some of us are engaged in a practical inquiry into some of the heavy charges (electrical and otherwise) in the vicinity. In pursuance of this investigation we have had occasion to visit the little store under Berkeley quite frequently. Yet, for some of our studies we have not been able to find any particular use. We have not so far discovered a good opportunity to apply our knowledge of the disconnected gab of an eccentric, nor have we been obliged to calculate on an early cut-off; nevertheless, we understand how to apply compression to the time spent in study, and can tell a crank by his motions the moment one appears in sight.

Ours is the only course which tends directly to cultivate musical taste and talent. For almost an entire year we were treated to two private symphonies a week. How pleasantly the hours passed, as we sat dozing and dreaming of far away, while the



gentle strains of the B-flat tuning-fork were wafted through the air, varied with the harsher wheeze of an organ pipe, or perhaps by a lullaby played on sticks of kindling wood! And then, too, the poetic thoughts that surged through our brains when we were told how the partial little tones combined with one another and turned into beats. Sweet dreams and pleasant music! But ah! how bitter an awakening when the Annuals came, and we were weighed,—and flunked. Not even a season ticket to the same course of symphonies next year could make amends for a shock like that.

Many of our researches in the sphere of physical experiment have been most startling. Among the facts hitherto unknown, but revealed by our disinterested efforts, was the striking truth that any body, if free to act, would rise at the rate of about two feet a second. We have made several other discoveries almost as important as this; one of us can even construct a cylinder with both ends in the middle.

Some of our number have earned large salaries as stop-watches during the summer, the practice had with the metronome in estimating tenths of a second while at the Institute rendering them far more accurate than the ordinary article usually sold by jewellers. Others give proof of being remarkable statisticians, by the way in which they manage to average readings and observations to the exact values given in Ganot.

In contrast to these tasks, prescribed by the catalogue and a wise Faculty, there are occupations of a lighter nature in which we at times indulge; for the life of an Electrical is not all a dull grind. Sometimes we disport ourselves at foot-ball, varied now and then with a game of tennis, and at times we have been known to go as far as to play pool. Then the other amusements to be found in a great city occupy much of our time, yet we manage to glide serenely along in our course undisturbed by any undue number of flunks. At times it seems as if it would be difficult to watch a foot-ball game and integrate  $dx$  at the same time; yet practice makes perfect, and now we can do much harder things than that. But in spite of such slight drawbacks, let us hope that we will neither be grinds nor loafers, but after safely passing the many shoals of our course, be able to put our S. B.'s in our pockets, and, with a quiet conscience, go to winding armatures at Lynn.



"Those architects have very heavy feet, gentlemen."

## COURSE VII.



If you wish to realize what a LIVING thing the Institute is, come to the Biological Lab. Although in the new building may be studied the Physical "relations of this organism to its environment," its chemical compounds, and that nervous mechanism, the Faculty, which controls everything; yet the skeleton of this organism, the region of its greatest mineral deposit, is in Rogers Building, and here, too, most important of all, is the basis of its life, *protoplasm*, the Biological Department.

Ask any one whether the "fundamental physiological properties" are found anywhere in a higher stage of development than here. Let us consider Irritability. This, as illustrated in the Biological Professors, has become so "differentiated" that its original

property cannot be discerned. Automaticity, that power of acting spontaneously, ah! how well is this exemplified in the Physiological students, especially on the afternoon of a foot-ball game. In the class in General Biology is depicted the "anabolic processes" of building up crude material into brain substance. (What is this we hear about ape-ical buds, in connection with the blossoming students of this same class?) That the destructive "cat-abolic processes" occur is evident from the weekly symphonies for which this laboratory is so famed. Have we not all heard those melancholy strains in C $\sharp$  sharp and D $\flat$  flat, and mistaken them for a Glee Club rehearsal?

Sometimes, on entering the lab., one catches a faint, faint odor. Is it due to the sweet fern hanging so gracefully overhead and standing on the table in jars, or to those other jars under the tables? Alas! we dare not say it is the odor of sanctity, for we have heard that belongs exclusively to Course IX.

"We met, 'by force of circumstances,' the usual way," is wafted on the breeze from a musical physiologist. Pray, what is the meaning of this? Why, surely, have they not been taught "there is no such thing as chance"? It is meet that they should sing their songs with scientific correctness. The favorite song at Wellesley, just now, "Roll, Jordan, Roll," came from our lab. Wellesley was always a religious college.

Beyond a doubt, the Biological Department has always been the most enlightened part of the Institute. This year it has many new lights "on the string," making its brilliancy still more dazzling than of yore.

"All ye who do hunger and thirst," come into the lab. and "see the animals feed,"—the Course VII. animals. The larger frogs "take in" their green and tender brethren, and the bacteria, the all-important bacteria, feast upon the clear-

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est (?) jelly; while the higher animals cause whole barrels of "nutrient" apples to melt away as if by magic. Occasionally the tempting aroma from a kettle of bubbling soup pervades the room.



"Round about the caldron go,  
In the poisoned entrails throw;  
Eye of newt, and toe of frog,  
Wool of bat, and tongue of dog;  
Cool it with a baboon's blood,  
Then the charm is firm and good."

And this does indeed produce a "charming" effect on hungry visitors!

A few days ago, a young lady, from a strict boarding school not far away, put in her appearance at the door, and accosted a youth in this wise: "I would like to see a bacterium. I have heard that there is one here." The idea of danger suddenly striking her, she drew her skirts tightly about her ankles, and exclaimed, "Can he get out?" "Oh, no!" rejoined the scientist; "the wild beast is caged over there" (pointing to one of the glass compartments). The maiden looked in the direction indicated, and seeing a dark object looming up among the tubes, cried out, "Oh, is n't he sweet?"

If you visit the laboratory, do not be too easily frightened away. Come in boldly. Never ask to see your friend outside. If the demoniacal grin of that skeleton greets you, do not be alarmed. He is simply trying to divert your attention from the fact that he is not what he pretends to be, but is only a "hash." Those people flourishing knives and razors in their bloody hands, are really very harmless, for the knives are quite too dull to be dangerous.

Not least among the pleasures of the Biological are the excursions. Every pleasant, chilly spring afternoon a little group, laden with tin cans, which, because of their size and brightness, attract the attention of all the small boys in the vicinity, may be seen setting out from the laboratory. Giddily they skip through the bogs and swamps, jump lightly over brooks and fences, meander down railroad tracks, and fill their tin cans with twigs, dead leaves, and little bottles of slime. These recollections, and many more, pass through the brain in a "whirlpool" at the thought of one of those "days off."



When all these joys are over, and with beating heart and throbbing aorta we "cut" the lab. for the last time, it is to feel that we leave behind us everlasting impressions, "embedded" in wax.

## COURSE VIII.



ONCE in cold and boisterous weather,  
When the wind without was howling,  
Heaping high the fallen snow-flakes,  
In 15 we sat and pondered  
On the works of many authors,  
On the endless lore of science.

Lying on the table near us  
Were the tools of calculation —  
Plotting paper in profusion,  
And the careful guide of Silas.  
But from all such endless labor  
For the moment we were absent,  
Lost in dreamy contemplation.

Down below the far horizon  
Sank the orb of day in splendor,  
Calling forth, as if by magic,  
Many a shining constellation.  
Then the ever-deepening darkness  
Hid from view our famed surroundings,  
E'en the seven place Vega tables  
Soon were lost from observation.

Suddenly and without warning,  
Through the door a glorious army,  
Knights and warriors who had struggled  
On the slippery fields of science,  
Filed in orbits whose equations  
Might have puzzled Johnny Runkle.  
At their head an old man tottered,  
Bearing on his brow the laurels  
Earned by many an integration.  
By his side, through smoke and vapor,  
And the sound of ebullition,  
Rose a spirit blowing bubbles,  
In which sparkled many colors,  
Varying with change of  $\lambda$ .  
Though he reached unto the boundary  
Of our mighty solar system,  
He could not, though long he labored,  
Find that strange, evasive substance,  
Which to gold should change base metals.

Mournfully and slowly onward  
Moved the dim and dusty column,  
Till they reached that long, low table,  
Where our feet are wont to linger;  
Then from out the inky darkness  
Shone a figure very "clearly,"  
Dressed in nineteenth-century costume.

"Sit ye down, ye wayworn wanderers,  
Sit ye here among the volumes  
Which your followers often flunk in,  
And let some one of your number  
Tell a short and pointed story,  
Taken from his own experience,  
But be certain to translate it,  
So that we may catch your meaning,  
For in Dutch we're not all experts."

Then up rose old Tycho Brahe:  
"Many a year I spent in counting  
All the shining stars of heaven;  
But my countings did not hinder  
Far into the future gazing.  
One night, when the sky was cloudless,  
I perceived far in the distance,  
In the far-off eastern heavens,  
Rising high a constellation,  
Which called forth my close attention.  
Blazing in that constellation,  
Blazing like the sun in splendor,  
Shone a star of wondrous glory,

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Far o'erreaching, far o'erpowering  
All its weak and puny brethren.  
Round about it there were gathered  
Other stars of lesser brilliance;  
Difficult it was to count them,  
But as ten I give their number.

Slowly from the low horizon  
Rose the constellation upward  
Till it reached its culmination,  
Reached its point of greatest glory,  
In that year of high achievements,  
Eighteen hundred one-and-ninety.

Thus, O heroes of the ages,  
From my distant lonely island,  
With prophetic eye and knowledge,  
I perceived the rise and progress  
Of this glorious Institution.  
I beheld Course VIII. the brightest  
Of its many bands of brethren.  
And the time of greatest honor,  
When the fame of Tech. shall reach out  
To the earth's remotest nations,  
It shall be that year prophetic,  
Eighteen hundred one-and-ninety."

Slowly to his seat in silence,  
'Mid the plaudits of his comrades,  
Sank the shade of Tycho Brahe.  
Then that clear and shining figure,  
Who before had spoken briefly  
(Looking much unlike a spirit),  
Asked in tones not unfamiliar:  
"Is there any other question?  
If not, then that is sufficient."

Then the many heroes vanished,  
Disappearing in the darkness,  
And the pleasant dream was ended.

## COURSE IX.



THE few members of this course have their abode in some beautifully situated rooms known as the Laboratory of Course IX. The small windows or loop-holes give it the appearance of a prison, but appearances are deceitful, and these well-ventilated and spacious rooms, with the walls decorated with fine crayon pictures, and the ceilings which nature has so artfully frescoed, make a fitting home for a literary life.

The course has been considered a snap, but it has been thoroughly changed and revised, and is now in the hands of a gentleman who will control it for (L)evermore. As second-year students we became acquainted with the professor whose appearance and dress were so deceiving as to his occupation, and whose syllabus of History we thought so "green." The debates in economic problems were enjoyed by all, and we have fresh memories of the "administrator" as he rubbed his hands through his glossy hair while we discussed "the

effect of barber strikes upon the wool crop." Biology had its many truths, and taught us to realize the truth of the expression that we were more dead than alive. The process of differentiation was discussed, and we learned what it was in reality at the Institute, when at the exams. we became differentiated more and more.

This year we are obliged to study. The pleasures of life are few, and every moment is occupied by reading a treatise on the "Doctrine of Transubstantiation," or drawing pictures showing the increase of people upon the uninhabited portions of Africa.

Advanced French has made its mark (F) upon the class, and how dear are the memorable words, "Ah quelle classe!"

We feel deeply grateful to the Seniors for leaving us "such good roots" from which we may obtain help and support.

The course is favored by one who, although old, still retains the faculty (or the "faculty" retains him) of administering over the youth, and has been appointed special adviser for the lower classes. "By his footsteps ye shall know him."

The work has become so oppressive that we are no longer obliged to have heat. As there are twenty pages to read upon the "Nibelungenlied," we will close with this advice to the Freshmen:—

Don't be misled by the tabular view,  
On reading the catalogue through and through;  
You never will enter the course when you've seen  
The thousands of pages required in Greene.



## COURSE X.



TOWARD the close of the spring term of 1887 it became apparent, in and around the "classic halls" of old Rogers, that something was wrong. "Jimmie" would be seen disappearing into the sacred precincts of the President's room, the key would be turned, and then silence. The members of the Faculty seemed sorely troubled, and even the "cage"-lady appeared more worried than usual. Inquiry failed to throw any light upon the mystery. Little by little, however, it was rumored that ten members of the Freshman Class had signified their intentions of leaving the Institute unless something was offered as an inducement for them to remain.

Matters looked dismal, and for a time it seemed as though nothing could be done to save the Institute from ruin.

As a last resort the President summoned the men to him. He reasoned and argued for hours, but all to no purpose; these men had made up their minds. His voice trembled as he bade them good by, and it was with difficulty he controlled his feelings.

That night he retired early, but not to sleep, and as his mind wandered over the happenings of the day it seemed as if his "Waterloo" had come.

The next morning the instructors were astonished to see how bright and happy the President looked, and they shook their heads doubtfully. But all unconscious of their anxious glances he went to his room and summoned the Secretary.

When the Secretary returned to his desk his face was wreathed in smiles, and there are people who are ready to swear that they heard him singing, "And his funeral's to-morrow." At any rate, within half an hour, the messenger, who had been matching checks with the "Bird," was on his way to the post-office with ten large white envelopes.

But I see you are growing impatient to know the contents of those envelopes. Well, I will not keep you in suspense longer. They were to the effect that if the ten men would remain, a new course would be prepared for them and named, in their honor, Course X.



A year has passed away since the events mentioned in the last chapter occurred. Time, as usual, has accomplished wonders, and we, yes, I am one of the ten, have



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lived to repent our hasty actions. But "*Jetzt lieg, wo du dir gebettet hast,*" as the *Einsiedler* says. Had there been thirteen of us, instead of ten, matters might have been different. We were not satisfied with what we had, and like the dog in the old story of "The dog and the piece of meat," we have gotten the worst of it.

Last year seems like a horrible nightmare, as I look back over the months of worry and disappointments, and I shudder as I think how near we came to joining the ranks of the "smart business men" that Tech. has turned out. Yes, we are all back this year, and, as a friend, I advise you, should you get into conversation with any of us, not to say much about the marking system; in fact better not mention it at all, unless you are looking for trouble.

What do we do? Well, we spent most of our time last year going from the chemical laboratories at the top of the new building to the drawing room at the top of Rogers. This year, to make it less monotonous, things are reversed. The Faculty seem to be afraid that we may feel hurt if we don't have the same studies the other courses have, and so our course is a grand combination of them all.

As a member of the ten, it would not, of course, look well for me to say too much in their praise, but there are a few facts which insist on being recorded.

Among our number we boast three members of the *TECHNIQUE* board, a president, a vice-president, and a treasurer. We have a foot-ball eleven, and have hopes of running two base-ball teams in the spring. There are many other things we have that I might mention, but modesty forbids.

I do not know of any course that is working any harder than we are, and I want to say that my time is so taken up that I had to set my clock back two hours in order to write this.

If we all manage to get back next year, without any of the Faculty seeing us, we shall expect on Class Day to show you what Course X. has done.

One little remark to the Freshman and I am finished. Don't get the idea that the Institute cannot do without you, for you will surely live to repent, as we have.



## BEHIND CLOSED DOORS.

NEW BUILDING, SECOND FLOOR, HALL.

Y

OUNG SOCRATES. — Tell me, Platona, why those dread words are placed above the portals.

PLATONA. — The Universal Good has so decreed.

YOUNG SOCRATES. — Then I can pass no farther?

PLATONA. — Is the wood the portal?

YOUNG SOCRATES. — No.

PLATONA. — Is not the portal rather the ideal form?

YOUNG SOCRATES. — Yes.

PLATONA. — Banish from thy cognition this idea, then there is no portal.

YOUNG SOCRATES. — But, I do not see.

PLATONA. — Then couldst thou take the alternative? Invest thy not-yet-existence with the form of janitor, and add the differentia of Inspector of Thermometers.

YOUNG SOCRATES. — Platona, thou reasonest well.

(IN MARGARET CHEENEY READING ROOM.)

YOUNG SOCRATES (*as janitor*). — I have not yet contemplated the truths of thermometers. What record shall I make?

PLATONA. — The mark you see.

YOUNG SOCRATES. — I have written F; shall I report it cold?

PLATONA. — Alas, no! it refers to heat.

YOUNG SOCRATES. — Now instruct me in the mysteries of the place. What are those strange red heaps upon the sofa?

PLATONA. — Two slumbering Sophists, zealous in the pursuit of physical truths, thus prepare themselves for the encounter of the next hour. They have attained the high degree toward perfection of being able to dispense with rest while the Great Teacher invests the non-existent world of sense with the archetypal idea.

YOUNG SOCRATES. — What statue is this?

PLATONA. — Hast thou advanced no further than sense perception? Truly, this is not a statue, but a young mathematician, stiff from the exercise of smiling, by which harmonious degrees the truths of analytics are attained.



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YOUNG SOCRATES. — What mighty problem engages the struggling students of that group?

PLATONA. — They endeavor to reduce to mathematical graphics the chasm between history and English, bridged by a theme.

YOUNG SOCRATES. — And this young student with soft blue eyes —

PLATONA. — Is contemplating the synchronous unanimity of two cardiac systoles.

YOUNG SOCRATES. — The spirit of the place is learning; the numerous books scattered around show the ardor of the occupants.

PLATONA. — Again thy judgment leads to untruths. These books are carefully arranged to inspire the ignorant visitor with reverence. Reading is left to the uninitiated. True advancement is made by contemplation and discussion, and these are exercised in the room beyond the curtains devoted to the Symposium. Daily there meet the lovers of philosophy and science, each furnishing her quota of the feast, and disposing of it also; while for the general company, the present problem, questions of the past, and anticipations of the future, are brought forth, and universal happenings are discussed.

YOUNG SOCRATES. — I confess I am at a loss to solve the final purpose of this place.

PLATONA. — One has called it "a refuge from mankind," though this definition met not with general approval. But, Socrates, believest thou not that thy fate warns thee of coming dangers?

YOUNG SOCRATES. — I do.

PLATONA. — Would not man do well to avoid what may not help him?

YOUNG SOCRATES. — He would.

PLATONA. — Behold, entering, the presiding genius of this place.

YOUNG SOCRATES. — Platona, thou reasonest well. I flee.





## AN INVITATION.

WE stood in the hall-way in silence,  
'Neath the old clock on the stair;  
And it seemed so hard to leave her,  
That I could not help waiting there.

How sweet she looked as she stood there,  
Her hand in my own resting light!  
My voice, when I spoke to her, trembled;  
With an effort I bade her good night.

Then she looked up at me shyly,  
And said in a voice quite low:  
"Won't you please leave a good impression,  
If you feel that you really must go?"

## A FABLE.

ONCE upon a time there were two brothers, of nearly the same age, who came to Boston from their country home to finish their education. John was a hard student, and on entering the M. I. T. was quickly promoted to a high position, that is to say, he was put to drawing on the seventh (more or less) floor of the building. James opened the covers of his books as seldom as possible, in order that the knowledge contained therein might not escape, and although he entered the same institution, he quickly gravitated downward and found a solid footing in the cellar, more to his liking.

On graduating from the Institute, John accepted a position as assistant instructor, at a small salary, and without hope of a raise, while James became head janitor, and controlled the whole institution. He conducted the office on such close principles that even the President was often compelled to remark in a forcible manner, "*What! No soap?*" And as far as civil-service rules were concerned, his management of the office would have satisfied the most ardent mugwump, for he would not even discharge a towel until its character had become so black that no self-respecting individual would go near it.

Kind reader, take this story to heart, and remember the moral, which is in capital letters three sixteenths of an inch in height, and in small letters one eighth, — "*He that Humbleth himself Shall be Exalted.*"



## VACATION.

WHEN students leave their books behind,  
And to the sea-shore hie,  
Ceasing an eight months' solemn grind  
Will cost few men a sigh.  
But when the summer's passed away  
And college days draw near,  
Parting with sisters, so they say,  
May cost some men a tear.

## THE BIGGEST LIE.

AN OLD CHESTNUT WITH NEW PRICKLES.

HUNTINGTON HALL was crowded to the very doors, for it was almost time for the great contest to begin. Three men, chosen by vote from the Institute at large, were to compete for a large sum of money, offered to the one who should tell the biggest lie. At the call of "Time," the cage door was opened and A. Keene Observer stepped bashfully to the footlights. Without any introductory remarks, he began, "Ladies and gentlemen, it is a well-known fact that the co-eds of the Institute are the handsomest girls in Boston or suburbs, but strange to say, they have no brains." *(Such terrific cheers and applause greeted the orator at this point of his story that he was compelled to sit down and meditate how he should spend the prize money.)*

The second speaker being duly sworn at, arose and said: "Dear sirs and sirees, I should like to say a little about the Faculty. They are so good to us that they never make us work any more than we want to. They are the highest paid instructors for their size in the country, and we all love them." *(Seating himself amid deafening cheers and laughter and cries of "Does the last man give it up?" the speaker held on to his pocket as if the purse were already there.)*

With a hopeless look in his water-colored eyes, the third speaker, Mr. T. Square Vignole, came out of his loggia, tremblingly advanced to the footlights, and, like the champion of a lost cause, said in a choking voice: "One day it was quiet in the Architectural Department and—" *("Oh! give him the money!" fairly yelled the audience in chorus, and the speaker left the platform, congratulated by his opponents, and carrying off, pinned to his coat-tail, a long cotton streamer marked "Champion Liar of Liars.")*



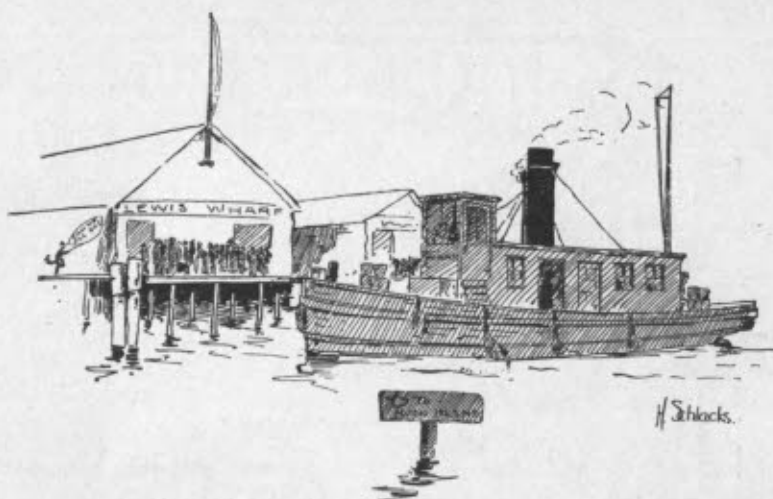
WHO softly glides in through the door,  
When, more or less, it's after four,  
And skates around across the floor?  
Ah! W-lk-r.

Who washed my sky when it was done?  
Who spotted it in gleeful fun,  
And kept me out of Mention One?  
Why, W-lk-r.

Who, when Course IV. has run its span,  
Will not feel badly, boy or man,  
When he no more nor longer can?  
C. H-w-rd W-lk-r.







## RHYMES FROM THE FREMONT'S LOG-BOOK.

Selected for '93.

THE Freshmen in buttons and brass —  
 The fleet in inspection to pass —  
 Turned out in full force,  
 With no dreams of a "horse,"  
 And boarded the tow-boat *en masse*.

The skipper had taken a bribe  
 To "sewer" that innocent tribe;  
 So he sailed past the ships  
 With a smile on his lips,  
 Though the Freshmen implored him to "gybe."

This obstinate son of the sea,  
 No ear for their pleadings had he;  
 The ships disappeared,  
 And slowly they neared  
 Moon Island, of odors so free.

The Freshmen they stamped and they swore,  
 Until it availed them no more;  
 Then, with many a curse,  
 They took up a purse,  
 To pay for their passage ashore.



Write your name here.

[No loose paper whatever is to be used in connection with this examination.  
This book must be returned UNMUTILATED.]

### EXAMINATION IN GENERAL INFORMATION.

1. State fully your reasons for believing that the roll should be called before a recitation, rather than after it.
2. Suppose a letter addressed to an Institute man reaches Boston on Monday, Nov. 18, 1889. Find the time elapsing from then until he receives it. Demonstrate formula.
3. A book costs \$1.13 $\frac{1}{2}$  and is sold for \$3; where was it bought?
4. Explain concisely why the tabular views are so arranged that recitations take place alternately at the top of "Rogers" and the "New" Building.
5. What are the functions of an assistant instructor? Describe as many varieties as you remember.
6. Given  $F = Ma$ . In what case will  $FF = GB$ ? State whether the GB is an absolute or gravitation unit.
7. What corrections should be applied to reports issued from the Secretary's office before they are sent home?
8. How many '90 men will get degrees? Solve by the combined laws of the Corporation and the Faculty.
9. Describe the process of petitioning the Faculty and its results. What is the H. P. of a Faculty vote?
10. Give three methods of getting twenty-nine hours' work done in twenty-four.

January, 1890.

## THE BALLAD OF THE "BIRD."

After Bret Harte.

OH, say, have you seen, when you ever have been  
In Rogers detained or deterred,  
A singular creature in form, style, and feature,  
Which they call the Technology Bird?  
Have you  
Ever seen this Technology Bird?

Notwithstanding its age, it trots round its cage  
Without e'en as much as a word,  
And the ladies all cry, when its figure they spy,  
"Oh, my! what a beautiful Bird!"  
Oh! do  
Just gaze on this wonderful Bird!"

It nests among notes, bags, umbrellas, and coats,  
Quite safe from the unruly herd.  
If you tell it to hurry, why never you worry  
But what you will feel quite absurd;  
Oh, no!  
You can't get the best of the Bird.

To obtain a letter or anything better  
From China or far Cape de Verde,  
Don't, in anger and rage, shake the bars of the cage,  
But be quiet in manner and word.  
That's the way  
To get on the good side of the Bird.

Since we have no more time, or suitable rhyme,  
Except what, kind reader, you've heard,  
With a tear in the eye, we must bid you good by,  
Yourself and the aforesaid Bird.  
Then "adieu  
To you and the singular M. I. T. Bird."

## A BUSTED STRAIGHT.

THIS time he's got a hand, I know;  
He drew one card and so did I;  
It puzzles me, his drawing so,  
He bets — I raise — the stakes grow high.

The rest drop out; we two alone  
Are left to buck and toy with fate;  
He bets — I call — the hands are shown —  
Mine? four twos! his? a busted straight!

S. L. C.

## A TRUE BILL.

THE Committee of Investigation appointed by the Faculty to look into the Moon Island episode have submitted the following report: —

Your committee find that the notice of invitation, purporting to be signed by one Charles A. Mann, is in every respect false and fictitious, and that the First Year Students, in accepting the same, are guilty of wilful ignorance. The only document in the case is the said notice, which is herewith submitted for the information of all concerned.

(Signed)

LINUS FAUNCE,  
THOMAS E. POPE,  
WEBSTER WELLS,  
*Committee.*

[COPY.]

INTERNATIONAL MARITIME EXHIBITION,  
MECHANICS' BUILDING, BOSTON, MASS., U. S. A.,  
Nov. 22, 1889.

The officers of the M. I. T. Corps of Cadets are invited, with other military organizations, to visit the flag-ship "Chicago," of the United States naval squadron now in the harbor, under the auspices of the International Maritime Exhibition.

Visitors will appear in uniform so far as convenient.

Tugs will leave Lewis Wharf, Atlantic Avenue, to-day, at 3 P. M.

(Signed)

CHARLES A. MANN,  
*Secretary of the Committee.*



*Monkey has gone; he left us for Cornell;  
This monument remains the tale to tell;  
His faults were few, lightly we let them pass:  
Above, behold his virtues writ in brass.*



"FOOD for powder." — *M. I. T. C. C.*

"THE rankest compound of villanous smell that ever offended nostril." — *Chem. Lab.*

"CAN such things be?" — *The Co-eds.*

"OF an inquiring mind." — *C-n-nt, '91.*

"I ONLY speak right on." — *W-ntw-rth, '92.*

"A SOUL without reflection." — *H-rw-d, '91.*

"ANOTHER such, and I am undone." — *Cl-ff-rd.*

"THERE is a method in his wickedness." — *P-lm-r, '91.*

"FEARFULLY wise he shakes his empty head." — *P-p-.*

"GOD made him, therefore let him pass for man." — *B-rtl-tt.*

"A COMBINATION and a form indeed." — *F. G. H-w-rd, '91.*

"So are they all, all honorable men." — *The Faculty.*

"HE may be honest, but he looks damnation." — *T-ls-n, '90.*

"HE seemed for dignity composed." — *L-v-rm-r-.*

"NEVER use a preposition to end a sentence WITH." — *B. R-nd.*

"SOLID chunks of wisdom fell from his mouth." — *H-wl-nd, '91.*

"AN indefinite, vague wish-for-more taste." — *H-lls, Ex-'90.*

"THIS relation, which we will see shortly — or somewhat later." — *Cr-ss.*

"THE world knows nothing of its greatest men." — *C-lk-ns, '90.*

"BUT among such as deal in multitudes of words, none are comparable to the sober, deliberate talker, who proceeds with much thought and caution, makes his preface, branches out into several digressions; comes back regularly to his subject, cannot readily call to mind some principle; holding his head, complains of his memory; the whole company all this while in suspense; at length says, 'It is no matter,' and so goes on." — *P-60*.

"COURSE X.'s no snap! D'yer know it?" — *Bryant*, '91.

"AND ne'er did Grecian chisel trace  
A nymph, a Naiad, or a Grace,  
Of finer form or — slower pace."

*The Bird.*

"NO profit goes wherein no pleasure 's ta'en." — *D-rt*, '91.

"I am his Highness' dog at Kew,  
Pray, tell me, sir, whose dog are you?"

*B-wk-r*, '91.

"I AM somewhat of a liar, myself." — *C. F. All-n*.

"A DRIVER with thirty-six teeth." — *Schw-mb*.

"A PLAIN, blunt man." — *D-pp-ld*.

"His tawny beard was th' equal grace  
Both of his wisdom and his face;  
The upper part whereof was whey,  
The nether, orange mixed with grey."

*Fuzzy*, '91.

"A FAST man." — *Swift*, '92.

"THERE was a long and acrimonious discussion between Sir Isaac Newton and a Dutchman named Linus." — *Cr-ss*.

"SO comes a reckoning, when the banquet 's o'er,  
A dreadful reckoning, and men smile no more."

*Exams.*

"WHEN twenty throats together squall,  
It may be termed a madrigal."

*The Glee Club.*

"WHAT a satisfaction it is to wake up in the morning, put your hand on your left side, and find your heart beating." — *H-wl-nd*, '92.

"WE grant, although he had much wit,  
H' was very shy of using it."

*H-p-r*, '91.

"CANST make a poet, spite of Fate,  
And teach all people to translate;  
Though out of languages in which  
They understand no part of speech?"

*V-n D-ll.*

## TECHNIQUE.

---

"MERE engines made by geometry." — *Peabodymatics*.

"LEARNED was he, and could take note,  
Transcribe, collect, translate, and quote."

*Em-ry.*

"WISELY and slow; they stumble that run fast." — *B-tch-ld-r*, '90.

"THE music of the spheres has nothing of the enjoyment of watching the course of one little sphere called a base-ball." — *Base-ball*.

"THE spirit of the living creature was in the wheels." — *Cycle Club*.

"HE bears the marks of many years well spent,  
Of virtue, truth well tried, and wise experience."

*J. D. R-nkl-*.

"MEND him who can, the ladies call him sweet." — *B-ckl-y*, '92.

"THEY had the horse on us." — *B-tt-*, '93.

"THE helpless look of blooming infancy." — *H-d-n*, '90.

"AND men fell out they knew not why." — *Exams*.

"A MAN he was to all the country dear." — *B-rr-s-n*.

"HE is the sole survivor." — *R-ts*, *Course IX*.

"T IS a cursed thing to be in debt." — *Football Association*.

"YES, loving is a painful thrill,  
And not to love more painful still;  
But oh! it is the worst of pain,  
To love and not be loved again."

*C-rt-n*, '92.

"IT is dangerous sporting with the world." — *Cl-m-nt*, '90.

"A LIGHT little love that will last to-day,  
To-morrow I'll sport a new one."

*Tr-wbr-dg-*, '91.

"THEY strain and tug until seems their very heart must burst." — *Tug-of-War*.

"THE counterfeit presentment of two brothers." — *S. and S. Stix*, '91.

"DOGMATIC jargon learnt by heart,  
Trite sentences, hard terms of art,  
To vulgar ears seem so profound,  
They fancy learning in the sound."

*Senior Theses*.

# GRINDS



## GRINDS.

### CLASS IN THERMODYNAMICS.

PROF. PEABODY (*finding a mistake in multiplication in his work on the black-board*). — Now, gentlemen, why did n't you tell me that was wrong? You see it is not the same as the book.

VOICE. — Oh, we supposed the book was wrong!

WHY are foot-ball players like non-union workmen? Because they are all scabs.

M-SSM-N (*reading*). — Der alte Poppel musste wohl recht schwach sein.

(*Translating*). — Old Poppel knew he ought to be washed.

WE were studying, one day,  
To find out a way  
Of rotating a wheel on its hub;  
Which, in order to do  
It, seemed to pass through  
A bevel gear — there was the rub.  
We tried and we tried,  
But failed to decide,  
And finally gave up all hopes;  
When up spoke Vielé,  
Who had thought of a way:  
“Why, we'll just make that wheel without spokes!”

PROFESSOR. — Mr. W., take the first sentence — “Eine Frau hatte eine Henne.”  
What does it mean?

MR. W. — A woman had a hen, sir.

PROFESSOR. — How would you put it in the inverse order, Mr. W.?

MR. W. — Eine Henne hatte eine Frau.

PROFESSOR. — What does that mean?

MR. W. — A hen had a woman, sir.

MARKINGS on the desks remind us  
How we've crawled from many a “bind,”  
And that we should leave behind us  
More inscriptions of the kind;  
Symbols that perhaps another, —  
All his “cribbing” done in vain, —  
A forlorn and “sewered” brother,  
Seeing, shall take heart again.

O JIMMY, dearest Jimmy,  
What fortunes us await,  
Now you've left it to another  
To decide upon our fate.



## TECHNIQUE.

IN THE MECHANICAL ENGINEERING DRAWING ROOM.

'92 MAN. — What is that big pipe with a door in it for ?

'91 MAN. — That is to go and talk into when you find your drawing is all wrong.

BR—DL — (*to GR—R, '91, who was copying calculus problems from the board*).

— Down in front.

BR—N—RD, '91. — He has no down in front, his is all on the sides.

WEAK-VOICED STUDENT (*in front seat*). — Mit seinen eisernen Ecken stieß,  
etc. With its iron corners —

PROF. ALPHONSE (*encouragingly*) — Well, what is stieß ?

VOICE FROM BACK SEAT (*frantically*). — Louder !

PROF. ALPHONSE (*with dignity*). — Oh, no, not louder.

THE greatest grind — Tech.

AN odd lot — The twenty-nine members of the Faculty.

THE OLD CLOCK ON THE STAIRS.

FOREVER — Never.

Never — Forever Twelve minutes past six.

G—RR—S—N (*studying valve gears*). — What is a cross-head ?

BR—DL —. — A cross head is a head without hair on it.

"Now, then," said the professor, "this gentleman is a Lowell Fly Frame."

PROF. OSBORNE. — If you've got the examples all down, you may go to the board.

MR. G. — All down but nine, sir.

PROF. LUQUIENS (*when Mr. G—T—B struck a match in the class*). — Thank you, Mr. G—t—b, for your light on the subject.

All the world is dark and dismal  
At Exams.,  
And your sorrows seem abysmal  
At Exams.  
Some books you've got to borrow,  
And you don't care if to-morrow  
Never comes to end your sorrow  
And Exams.

PROF. L—N—ZA (*to fourth-year architect*). — What is the first record of timber tests?

BRIGHT ARCHITECT. — When Adam shinned up the tree of knowledge to pick apples for Eve.

To separate them would not do,  
For one could never get along  
Without the other two.

*L-l-nd, L-bb-y, and M-tch-ll, '91.*

## TECHNIQUE.

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WHO SAYS FOOT-BALL DOES N'T EDUCATE?

A PAPER has recently been picked up, marked "J. A. Highlands, Intermediate Exam. in Descrip. with 100 in the corner."

W. P. BRYANT,  
The intellectual giant,  
He can repeat almost word for word  
Everything he has ever heard.  
He rattles Osborne, astonishes Schwamb,  
And knows "memory gems" as long as your arm.

It is said that the author of "A Hole in the Ground" got that name for the piece from a sight of long-suffering Boylston Street.

A SUNDAY OUTING.

THERE goes the rabble with its books,  
To hear the babbling Phillips Brooks.

SUBSCRIPTIONS will be thankfully received to provide a *fresh-air fund* for the Rogers Building.

SAID Samuel Stephens, Esq.:  
"Some boys I must certainly fire;  
They are smart enough, but  
For foot-ball they 'cut,'  
You can bet it won't make their marks higher."

COME! "Drown" your "Cross" nature in wine, ale, or "Porter,"  
In "Wells" of pure nectar, in "Niles" of champagne;  
Let the goblet—"S-edge-wick"—edly lure you to pleasure,  
Let the "Dewey" drops ting—"Le-vermore" through your brain.  
May the thought, that w—"Os-born" from a fear of excesses,  
Be carefully fostered by every "Swain,"  
For he who gets d—"Runk 'l" have cause to regret it,  
He can "Cros-by" no way a w—"Hole-man" again.

Come, "set-em-up," in steaming toddy  
We'll drink a bumper to C. P—b—dy;  
If cut-off come, as cut-off may,  
By readmission we may stay.

It has been proposed to calibrate the clock in the Analytical Laboratory, and to provide each student with a burette card containing the results, so that he can "check" with the tabular view without being forced to resort to "the indirect method" for ascertaining the time.

PROF. DROWN'S class in Analytical Methods are now reading, "Über die Reinigung der Platintiegel mit Aqua Regia, von W. P. Bryant."

## TECHNIQUE.

### A BIT OF HISTORY.

FROM Munroe to Tyler; or, A change of Administration from Red to Black.

"OUR Institution offers all the modern advantages to students," writes the Secretary to an inquiring parent; "and an electric road runs between the school and our Chapel."

PROFESSOR (*calling roll; one student answers for another student, who is absent*).—All those who are not present, please not answer.

"ARE there many such little boys as M—ch—do at the Institute?"—*Miss. W—th—rbee at the T. D.*

No enjoyment can we borrow  
From our destined end or way,  
But we grind in each to-morrow  
What we should have ground to-day.

F—G—R, '91, was requested by Mr. Emery to prepare an abstract on some one of Ben Jonson's work. To save time F—g—r, '91, copied the selection, word for word. In due time his paper was returned to him marked with a P. He was very much disgusted, and remarked to a friend: "If Ben Jonson can't get more than a Pass, I might as well pack up and go home."

STUDENT, what do we use the Descriptive Geometry for after we've learned it?

PROFESSOR.—I don't know, I'm sure. I don't have you after that.

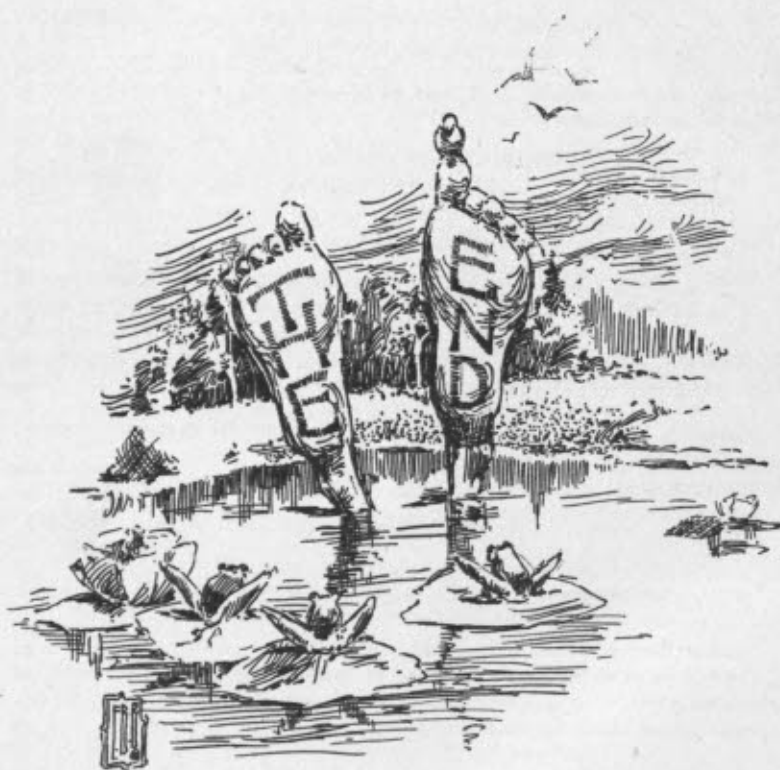
T. SQUARE, Jr., your pencils and paper can be obtained from Frost and Adams, but not from Freehand Adams.

"WELL, let me see," said Prof. F——, "what kind of work have you done previous to your entrance here?"

"I have had some practice in dentistry, sir."

"Oh, then, of course, you are excused from mechanical drawing, provided you have some plates to show. By making arrangements with the Secretary, you can probably get out of drill for the same reason."

"THERE," said Sporter as he sat down after putting his collie dog through a number of very good tricks, "I guess you'll find it pretty hard to beat that in the dog line, even if you have got a prize German dachshund. A dog like that of yours is good only to look at anyhow, and absolutely useless." Did the owner of the dachshund feel dissipated at this outburst, and resolve to get rid of his canine pet at any price? No, indeed he did n't. He quickly ascended to the roof accompanied by the dog, and whispering in the animal's ear the magic words, *Sic 'em! clean 'em out*, he dropped him head first down the soil-pipe, and by the vigorous scratching as the brute descended it was very apparent that *Mortimer, the pipe and trap cleaner*, was in fine form that evening. (There is a collie for sale cheap.)



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THE  
MASSACHUSETTS \* INSTITUTE \* OF \* TECHNOLOGY,

BOYLSTON STREET, BOSTON, MASS.

FRANCIS A. WALKER, PRESIDENT.

THE Massachusetts Institute of Technology offers courses, each of four years' duration, and leading to the degree of Bachelor of Science, in Civil, Mechanical, Mining, Electrical, Chemical, and Sanitary Engineering, in Architecture, Chemistry, Biology (including a course preparatory to the study of medicine), and Physics. Less strictly professional courses are offered to those students who wish to qualify themselves for business pursuits.

To be admitted to the first-year class, applicants must have attained the age of seventeen, and must pass satisfactory examinations in Arithmetic, Algebra, Plane Geometry, English Language and Literature, History, French (or German), and Geography.

A division of these entrance subjects between two successive years is, with certain restrictions, permitted.

Entrance examinations are held at the Institute buildings in June and September of each year. In June, 1890, applicants will be examined in New York City, Philadelphia, Chicago, Cincinnati, San Francisco, Washington, St. Paul, Pittsburg; perhaps, also, in St. Louis, Kansas City, and Nashville.

Graduates of Colleges and Scientific Schools are admitted, without examination, to such advanced standing as is warranted by their collegiate training.

Instruction is given under the superintendence of professors, instructors, and assistants, by means of lectures and recitations, supplemented by laboratory, drawing room, and field work. A high value is attached to the latter means of training, and, to that end, extensive and well-equipped laboratories are provided.

Special courses are offered to those properly prepared, and the degrees of Master and Doctor of Science, and of Doctor of Philosophy, are given for higher professional work performed under the supervision of the Faculty.

The tuition fee is \$200 a year. The cost of books, drawing materials, etc., need not exceed \$30 a year. No additional fees, except for chemical breakage, are exacted.

For catalogues and detailed information apply to

H. W. TYLER, *Secretary*.



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*Q is for Queered, which may none of us be,*

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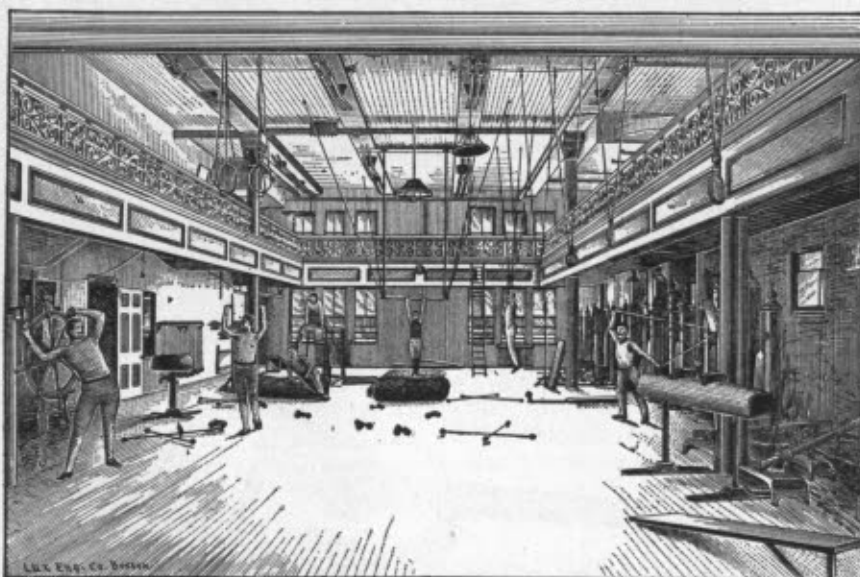
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*Swan is the man who presides o'er the toasts ;*

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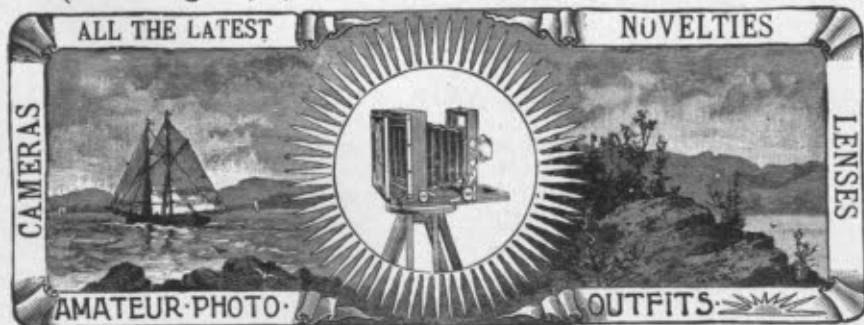
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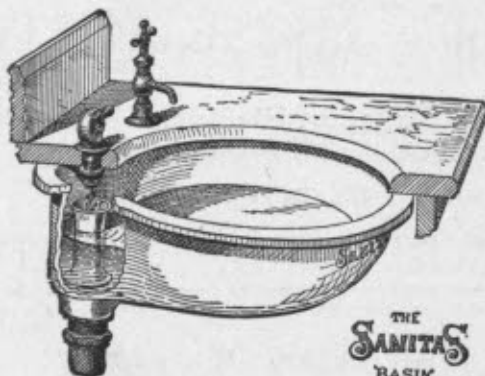
*By asking conundrums about Pol. Econ.*

*X is the course that was started last year,*

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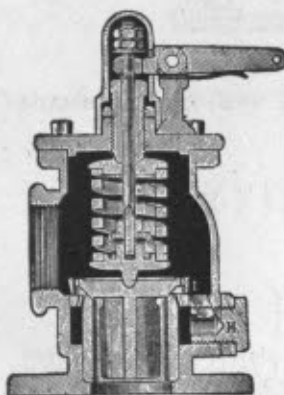
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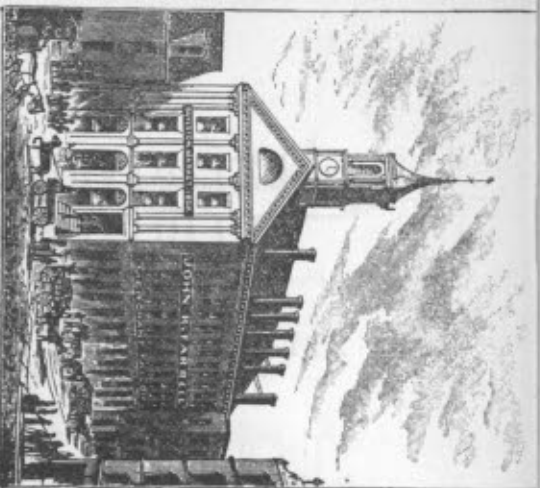
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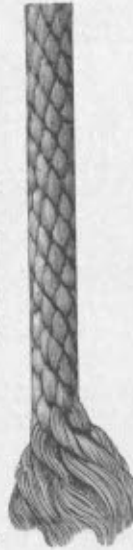
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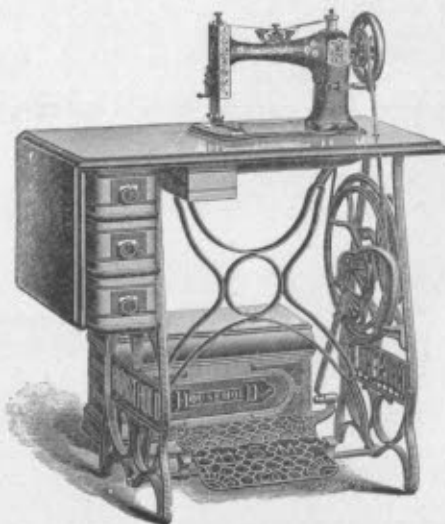
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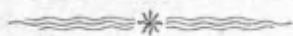
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