

# THE TECH

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## THE TECH

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*For the benefit of students THE TECH will be pleased to answer all questions and obtain all possible information pertaining to any department of the College.*

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WITH this issue our work for the school year is ended. The labor of publication has necessarily borne heavily on the members of the board, especially in a college where so little time can be given to literary study or to any but professional work. Nevertheless, their labor has been most pleasantly lightened by the sympathetic helpfulness of many of their fellow-students, and by the spirit of kindness which has greeted their oftentimes blundering efforts. They also wish to register their most grateful thanks to the members of the Faculty and of the English Department who have given them advice and assistance.

The past year has been one full of growth and vigor for the Institute, and a hasty glance at some of the phases of our various student activities will not be out of place. The central and impelling movement from which many of our new and renewed activities have taken their momentum, is that crusade headed by Dr. Pritchett, which is making for better student conditions, both social and physical. The institution of social class meetings, the increasing interest in athletic and gymnasium work, the renewed activity in professional societies, the planning and erection of the Technology Chambers, and the Technology song-book movement, have all been the results of Dr. Pritchett's crusade. And now, last of all, the question of forming a student colony at Jamaica Plain, or of a possible removal of the Institute to the suburbs, are questions hovering in the air.

In athletics several important changes have come. The struggling but unsupported football team has died a natural death, while the interest in track athletics, as witnessed by the enthusiasm at the triangular meet, has experienced a new birth. The fall games between the two lower classes have taken the place of the old-time unfortunate cane-rush, and rather special activity has been shown in cross-country running. The most important tendency of the year's work, however, is the increased interest in individual track work.

In many other ways the year has marked our growth and progress. The entering class is larger than ever before, and in all probability will be surpassed by following classes. The plan of having various prominent men speak to the students at mass meeting in Huntington Hall is a most delightful forward step; nor should we forget the generous prize offer for the best essays written on these speakers. And last of all, one of the prettiest little feathers in our cap is the selection of the Institute as a naval engineering school for graduates of the Naval Academy at Annapolis.

### Alumni Reception.

The first of the festivities attending the graduation of the Class of 1902, the reception given by the Alumni Association, was held on Friday evening, June 6, at the Brunswick Hotel. The attendance, which was about three hundred, was largely made up of 1902 graduates, though there was a good showing of alumni. Among the alumni were numbered about twenty women graduates of the Institute. After a well-served spread, and those present were seated, the presiding officer of the evening, Mr. Hill, who is president of the Boston Association of M. I. T. Alumni, and who acted in the absence of President Main, opened the speeches. His address of welcome to the graduating class was followed by his introducing President Pritchett. In the course of his remarks Dr. Pritchett referred to the new changes in the administrative officers by the election of a dean, a recorder and registrar, by which system the executive work could be much better accomplished. Passing to the technical work of the school he explained the changes in the courses in electrical engineering and naval architecture. Finally he paid a tribute of respect to Professors Runkle and Niles, who, upon the occasion of their taking leave of active work at the Institute, have had conferred upon them by the corporation the distinction of Professor Emeritus.

The second speaker of the evening was Mr. A. Lawrence Lowell of the corporation. The social life, or the lack of it, at the Institute, formed the central feature of his remarks. He found among engineers a lack of solidarity such as there is between those of the medical and law professions. He, however, believed that it was possible in the future to realize a better ideal of social life at the Institute without sacrificing that strenuousness which has made the Institute what it is.

Following Mr. Lowell was Professor Burton, who has been appointed to the office of dean. Professor Burton spoke of the general conception of the office of dean, and of the aid and advice which he might expect from the alumni. Mr. Hill, '77, representing the class which graduated twenty-five years before, spoke of the social life at the Institute in his time. The last speaker was President Currey of the Class of 1902, who briefly thanked the Alumni Association for its reception, and with that the evening closed.

### THE GOOD THINGS LEFT BEHIND.

A BACCALAUREATE SERMON.

Delivered to the Graduating Class of the Massachusetts Institute of Technology, June 8, 1902.

"The cloke that I left at Troas with Carpus, bring when thou comest, and the books, especially the parchments."—*I Timothy. iv. 13.*

**P**AUL'S great motto in life was: "I count not myself to have apprehended. Forgetting the things that are behind; looking forward to the things which are before." He believed that the prize of life was in the future. He was a forward-looking man, eager, inspired, indomitable. And for this characteristic of one of the greatest of men we can never be too thankful. It makes him always young. His life is just beginning; infinitely the better part of it is in advance of him, wherever you find him. It makes his world young. It is just beginning to roll out of darkness into light; it is wheeling forward in the still brightness of the morning. It qualifies him to be the pre-eminent leader of the young. In the dew of his own youth he is forever appealing to the great-hearted, royally endowed youth of the world. It makes all those who associate with Paul young. It is impossible for us to enter into the thoughts and the feelings and the eager anticipations and the great psychic movement of this man without forgetting about time, and feeling how divine life is, and how true it is that the supremely good part of it is still in advance.

Nevertheless, Paul found that it was occasionally necessary to look back. He found that even he had forgotten certain things that he should have remembered;—that he had left behind him certain extremely useful things. And therefore he looks back in the text, and tells his friend and disciple, Timothy, who was coming to join him, to bring with him the cloak that Paul left at Troas when he crossed over to Europe, and the books, and especially the parchments.

It is exceedingly comforting to find an inspired apostle forgetting things which he should have remembered. If we cannot equal him in his inspiration we can equal him in his lapse of memory. It is easy to forget; it is so convenient to forget; it is so comfortable. The greatest thing in Kipling's "Recessional" is his words to a proud

nation: "Lest we forget! Lest we forget!" And Hood's memorable saying, that "Sin is wrought for want of thought" may be paralleled by the saying, that "Sin is wrought for want of memory." The drunkard forgets; every man who repeats an act of injustice, of inhumanity, of selfishness, anywhere, has forgotten. He would not do it if he remembered everything connected with the act. And this facility, this fatal facility for forgetting things which we should remember, characteristic of the disciples of the Master in all ages and in our own, I heard pathetically described by an old Christian, who said: "I am not crazy, but my mind is short." There is indeed an exceeding short-mindedness characteristic of all human beings. And while we are sharing the mighty impulse of the new century in its great providential trend on toward better days and better conditions for mankind, it is worth while for us to look back, with Paul, and see if we have not left something at Troas that we should be glad to carry forward with us into the future.

Paul sent for the cloak. That stands for the physical wisdom of the world; the wisdom upon the great business of living as those who inhabit bodies conditioned by physical law. We cannot live without the best wisdom upon sanitation for our homes, for our cities and for the country. We cannot live without the best wisdom and the purest patriotism in our legislators and in our high administrative officers. Indeed, it will not pay for the farmer or for the miner or for the manufacturer or for the merchant, or for any business man anywhere, to forget any part of the wisdom which observing and thinking and suffering men have accumulated with reference to the great business enterprise of the world. It will not do to leave the cloak behind at Troas in any vocation of life.

When it comes to physical living it has long ceased to be an axiom that in order to be a saint a man must be sickly. Sickness is not the path to sainthood. There have been saints, men and women, who have found sainthood along that path, and they deserve a double golden crown. The first means of grace is a sound body. No man can do the work which is required of a man in this world, who is not in good health. The first axiom of success in this world is to

conserve — reverently, religiously — the life of the body. Winter is coming on — tell youth in the pride of its power that winter is coming on; you have a long path before you; the environment is severe, hard, enough to try the best lungs and the best heart and the best organism that God ever made. And if you want to live to do your work you must be a person applying the world's physical wisdom to the guidance of your own physical existence. Food, exercise, sleep, obtaining the cloak from Troas — all the things which sound like commonplaces are part of the equipment of the man who will grapple successfully with the problem of life.

And this is what makes one impatient with that which calls itself Christian Science. It has many good things about it: it gives repose and dignity to nervous souls. It has many good things about it; but in so far as it pours contempt upon the accumulated wisdom of mankind along one great path and in reference to one great human need, it is a calamity. I do not care for extemporary persons in any walk of life, — an extemporary engineer, an extemporary sea-captain, an extemporary lawyer, an extemporary carpenter or stonemason, — but the worst thing in the world is an extemporary doctor and extemporary medicine, flat in the face of the accumulated physical wisdom of a suffering humanity. This extemporaneousness is a calamity; something to be opposed with unrelenting vigor. Nothing but wisdom can save men. Make-believe sick may do very well when you are well, but make-believe will when you are sick is a poor respite. Make believe on any subject under heaven that is serious belongs to the nursery, and nowhere else.

Paul sent, in the second place, for his books. He was a thorough scholar, — one of the best informed minds of his age. He knew better than anybody else of that time the meaning of all the fundamental movements of the world, — political, social, intellectual, religious. He was, besides, a man of great originality, marvelous fertility of thought, pouring out its richness on every subject. His thoughts, his own personal thoughts, were an exceeding great multitude, and they were very grand and very beautiful. Besides, he was a man of extraordinary travel. He met all sorts and conditions of

people, — Jews of all classes, Greeks of all classes, Romans of all classes. He traveled from one end of the Roman empire to the other, and spent thirty years in traveling. Now, if any man could have dispensed with reading, here is one. Look at his education; look at his appreciation of the movements of his time; look at the originality of the man's intelligence; look at his contact with all classes of men, informing his mind out of living mind perpetually. And yet he longed for the serene and majestic air that one finds only in books, for the shining minds of the world, fixed and everlasting in their brightness, into whose quiet and glorious presence one comes through the great books of the world.

We must send for the books as he sent for them. There is for example, the thing that lies nearest us all — our family life. What benefit will come to us from something like an adequately religious, an adequately profound conception of the meaning of that great relation! Take a book like the first third of Maurice's "Social Morality"; put that into the mind, and the home flowers into new beauty and sends forth a new world of fragrance. Take, for example, friendship, — one of the richest things in human life. Take it, and let a great Greek philosopher tell you what it means for life, and how much stronger you find yourself! Take the great "Institute" of the nation, — that which has absorbed much of the intellect, much of the energy, much of the time of mankind. Think of this vast accumulated organization which has come out of the inventive intelligence of mankind. Where is the book that will lead you into the poetry, the philosophy, the marvelous human significance of this "Institute," that has been created and sent forth out of man's intelligence? Here is our nation, as solid under our feet as the pendent world. We cannot love it as we ought unless we understand it as we should. Send for the Declaration of Independence, which we all have heard declaimed a hundred times, and which probably not a hundred of us have ever seriously studied for two hours. Send for the Constitution of the United States, to which every citizen gives his oath of allegiance, and not one in a thousand has ever read through. Send for the great papers of Hamilton in the *Federalist*, and see the frame-

work of the nation built before you in model by a master mind. Send for Washington's Farewell Address, which every American praises, and once in a while reads. Ponder the great speeches of Daniel Webster, — among the classic utterances of the world, massive, well-considered, the great popular embodiment of the fundamental ideas of the country, — which one cannot lay to heart and remain uneducated in the philosophy of the nation. Send for Abraham Lincoln's Second Inaugural, which sounds as if a Hebrew prophet had written another Psalm. These are the books! Send for them, if you have left them behind. Bathe your intelligence as a citizen in their living wisdom; warm your heart with their great inspirations. You are bound forward with the new century; take these books along with you.

There is the wonderful world in which we are living, — the rocks with their history written in characters that are so grand; the flowers with their story wrapped up in their beauty and in their fragrance; the birds, the poetry of heaven even more than the stars; the marvelous, the multitudinous forms of life on this planet. Get where you can form some conception of the marvelousness of the world through which you are passing. Send for the books to help you to catch the vision through the blinding detail of the great scientific ideas of our modern time.

Send for the poets. There is music, there is rhythm, there is passion, there is pathos, there is love, there is sorrow, there is death, there is hope — all seething and swelling and rolling in this great life of ours. Send for the poets, and stand in their bright vision; move in the tide of their great passion, and let them send you forward with their wisdom and their inspiration.

You remember the Ethiopian prince of whom the Evangelist Luke speaks. When he went back to his own country, as he rolled forward in his chariot he sat reading one of the greatest of the Prophets and one of the finest passages — he had an eye for literary as well as spiritual excellence: "He was wounded for our transgressions; He was bruised for our iniquities; the chastisement of our peace was upon Him, and by His stripes we are healed." And he was pondering that — just as you might a passage in Shakespeare, or in some other great writer — rolling for-

ward in his chariot, the great machine under his guidance, but in the moments when he could detach himself from looking after the great chariot, reading the great book. Now men tell you that business is engrossing; that one must live in business if one would succeed. They say: "We must look after the great rolling chariot of the world. Our bread and butter depend upon our looking after it. And then, we meet living men; we are traveling all the time; we know what is going on." Why, of course you do! But remember that the machine may be so looked after as to allow for moments of leisure, when you can let it run and read while it runs. Take the chief engineers in our great Atlantic liners; how splendidly informed they are! What is the virtue of Kipling's "McAndrew's Hymn" but this? He but shows a great liner's engineer, a thoughtful and richly equipped intelligence. When the storm is on, the engineer is down in the depths looking after the play of his great machine. There is no time for anything then but to look after the fires, look after the valves, after the boiler, after everything connected with the thousand-limbed and splendid thing. But there come pauses when he can talk, or retire to his stateroom and read, and keep his mind in contact with the great minds of the world. Business men should follow his example. The machine must not tie you down to it. There is no reason why you should not operate it so that occasionally it shall run of itself, run while you read.

And finally, Paul sent for the parchments. Of course the parchments were the most precious forms of literary record, and they contained in them the most precious wisdom of life. And the parchments mean to us something greater than the physical wisdom of the world; greater than its best books. They stand for the spiritual wisdom which the past has found for us, and which we must not leave behind.

Take, for example, the world of awe and beauty into which we were born as children. Oh, how much it would add to our reverence and our humanity if we had not left that world behind! Oh, to have taken that world of awe and grace forward with us all the while! How it would have sweetened our entire existence! Take the heroism and the sacrifice and the boundless tenderness through which we got our start into life. Have we forgotten that parchment, have we left that behind—

the tradition of parental heroism and parental sacrifice and parental tenderness? Remember the faith, the faith in God, the high devotion to Christ, the confidence in the moral order of the world and in the infinite life in which our fathers and mothers lived; have we left that parchment behind? We cannot live as their descendants without these.

But there is a nearer treasure that one must recall. You remember the time when the moral ideal first rose on you. The old Christians used to call that their "conversion." That word sounds rather cantish to-day. Let it go, if it does. But every man who has ever seen the moral ideal rise upon him like the sun at midnight, has no language in which he can describe its power, or its benignity, or the surprise or the awe with which it filled his soul. President Finney said that when God converted him he wanted to get to the top of the highest mountain and take a trumpet and blow to the whole world the tidings of the joy he had found. That was simply his way of celebrating the interior glory of the soul that has looked upon the face of God in the dawn of the moral ideal. You remember that; send for that parchment, if you have left it behind. And the vows that you made then, and the resolves with which you filled your soul, and all the past history of your life in self-consecration to high ends; send for these parchments written in "star-fire and immortal tears." Send for them; you need them on your journey through life.

Take this earth of ours to-day, rolling forward and never rolling backward, forever going forward, never, never in any retrograde motion. But in its forward sweep it takes everything with it,—all the dear dead, all the numberless graves on its surface; it guards, keeps, carries forward the living and the dead together, the past and the present, pursuing the unspeakable goal and sweeping forward while holding within its compass its whole past, its entire history. And that is the way that God lives. He never forgets anything; He never loses anything; He carries everything forward, and has carried it from the morning of time until now. And when His consummation is reached He will have that consummation glorified by everything precious that has come to pass in the long process from the beginning to the end.

That is our ideal. Keep everything that is precious that has come within the compass

of our life; hold on to the wisdom of the world for our physical living. We cannot dispense with it. Seek access to and communion with the supreme minds of the world through their books. God has preserved them, not for scholars only, but for human beings everywhere. Above all, keep and devoutly use and glorify life with the spiritual treasure of the world, and roll forward in the sunshine of the Master's life and with the benediction of His presence fulfilled in your hearts: "Lo, I am with you alway, even to the end of the world,"—Christ, the atmosphere of your rolling life, its everlasting sunshine, its benignity, its joy and hope.

Young gentlemen of the Graduating Class: One epoch of your life is about to close; another epoch is about to open before you. You have long looked forward to this time, and one great object of desire is almost within your grasp. You have won distinction here; you have earned the right to leadership in your generation. You are about to leave your Alma Mater for the Institute of the world. You will seek new ends, win fresh successes, attain other distinctions. The world is all before you where to choose your lot. It awaits your coming with generous welcome and high expectation. Take with you into the new Institute the things that have made the old Institute here in Boston so rich and great to you. Take with you its famous name, and add to its distinction by the honor of your career. Forever cherish its ideal of the man of science as the lover of truth and the servant of society. Carry on into the future the consciousness of order and its inviolableness that your education here has given you, and the sense that obedience to law brings the universe, in ever larger measure, into life as the helper of mankind. Hold in perpetual remembrance the high example of the wise and beloved teacher; take with you all the friendships, all the light-heartedness and all the rich humanity of these four unforgettable years. And leave not behind the good wishes and the prayers of those whose confidence in you and whose sacrifice for you made it possible for you to come hither; and as the sea into which all these separate streams of interest and dear affection flow, as the ocean tide that returns upon these to greatness, take with you in vision, in faith, the Infinite presence, the grace of the Lord Jesus Christ, the love of God and the communion of the Holy Spirit. God bless you. Farewell.

### Class Day.

The Class Day exercises were held as usual in Huntington Hall at two o'clock, and a large and appreciative audience listened to the various speeches. The Class Day officers were: First marshal, Louis Shattuck Cates; second marshal, Charles Adrian Sawyer, Jr.; third marshal, Albert Eaton Lombard; president of 1902, Harold Young Currey; orator, Isaac Rayne Adams; historian, Walter Havens Farmer; prophet, Carlton Brigham Allen; statistician, William Jason Mixter.

President Currey spoke in behalf of the class as follows:

President Currey, for the Class:

LADIES AND GENTLEMEN: The Class of 1902 takes the greatest of pleasure in welcoming you to these exercises, which mark at once the end of our undergraduate existence and the beginning of a new and more serious life.

For four years we have been pursuing the courses of study and training outlined for us by the Faculty, and although we realize that there are many things still unknown to us, we are grateful for the solid foundation we have gained. We know that it is not only the knowledge which will help us in our struggle to become stronger in morals and character, but that the spirit of Technology in which we have lived so long will always influence us.

We realize that our superior advantages place us under a great obligation to act with strength and courage, and since we are so soon to become men in name, we are most anxious to become men in action, and be a credit to our school.

We want our parents to know our great appreciation of their constant care and support during our course, and we wish to thank the Faculty for their deep interest, and hope both may have cause to feel repaid for everything they have done. We cannot forget the loyalty of our friends, who have watched our progress so long, and we are very glad to have this opportunity of welcoming all of you to our Class Day.

The class has chosen one of its number to officiate over the exercises,—one who has shown himself fully capable in the offices he has previously held.

I am much pleased to present the first marshal of Class Day, Mr. Louis Shattuck Cates.

Mr. Cates :

MR. PRESIDENT, PARENTS AND OTHER FRIENDS :  
The Class of 1902 welcomes you to its Class Day. To us it marks the end of our course of study, in which we have laid the foundations of our work. To you our parents and other friends, we hope the day will be one of interest and enjoyment.

To describe our emotions as we see you before us, would be impossible. In almost the same breath we are glad and sorrowful. We are glad because, like the trained athlete, we are anxious to run the preliminaries in our struggle for honors in the greater world. Sorrowful, because from this day forward our four years of associations and study are to be reckoned in the past.

To-day the bonds of friendship formed during our undergraduate life show their worth. You see us together ; to-morrow, although we go to all corners of the globe, these friendships will still be as strong. We have little fear of losing friends made in struggle, defeat and victory.

In our four years here we have come in contact with the problems which confront men, and we have solved them as best we could. It is here that we have shaped and matured our minds and formed our ideas. Foremost among the many things we hope to impress you with to-day is our loving sense of indebtedness to our Alma Mater.

In order that you may know more about us and the road we traveled to reach this long-desired day, I take pleasure in introducing our historian, Mr. Walter Havens Farmer.

Mr. Farmer :

MR. MARSHALL, FELLOW-CLASSMATES AND FRIENDS :  
Man is always seeking for insurance. It may be insurance against loss of life, accident, financial loss, loss of reputation, or against many other losses. Among these many kinds is one of which I wish you to take especial notice ; namely, insurance against false criticism. A history may very properly be called a record of events and occurrences. As the chronicler of those events and occurrences connected with the Class of 1902, I am in duty bound to state them as they took place and as they were. For this reason it seems wise to take out an insurance policy for the Class of 1902, to protect it against false criticism, jealousy and conceit.

In tracing the course of our class during the past

four years, I shall take the liberty of recalling some of the most important developments which the Institute made during corresponding periods, and which were more or less intimately connected with our class.

For instance, on the opening of the college year, in the fall of '98, the Institute had just completed the Henry L. Pierce building, which increased by one-quarter the capacity of the buildings already erected, by adding forty-five thousand square feet of floor area, and all this solely for the especial needs and requirements of the entering class.

I refuse to tabulate the one experience which befell our class, and from which we came forth with no more laurels than did any of the preceding classes, and personally with very much less. I refer to the opening day of our Freshman year. Should any one be unfortunate enough to desire further information on the subject, I suggest that that person look it up in any publication ever issued at Technology.

In spite of the "Y. M. C. A. reception to the entering class," we were never formally introduced to the Class of 1901. There was a little "informal handshaking," however, on the occasion of our class election in the hall below. Even the two heads of the Institute decided at the last moment to join in the general jollification, and they even gave some of us a brotherly grasp of the hand. I think it can be considered a drawn battle, as far as honors are concerned. Naughty-one had more men captured, whereas Naughty-two was constitutionally disabled. At all events, both classes saw fit to apologize to each other through President Crafts, in the form of a written promise never more to indulge in such informal introductions.

Soon after our health recovered from the renewal of our constitution, but long before we were able to distinguish Engineering from Pie Alley, our military career began. Like everything else which we undertook, we started with new material in the person of a brand new captain from the regulars, Captain Boardman. Under his skillful guidance we made a record in military drill and tactics which stands pre-eminent in the annals of M. I. T. Possibly Captain Boardman's phenomenal success with us was due in a large measure to the fact that he, to quote his own words, "approached the subject from a synthetic rather than from an analytic point of view," as had been done the year previous.

The only time we copied Naughty-one was when we decided that their style of drill uniform could not be improved upon. We even secured the very suits they had, in so far as we were physically able. In most cases the suits were somewhat too small, especially in the case of a certain member of our illustrious drum corps. We *did* improve upon the head-gear previously worn with the uniforms, and very sagaciously picked out a cap which we were afterwards able to dispose of to the street-car conductors without much pecuniary loss to ourselves.

We earned our Thanksgiving dinner by defeating the Sophomores at football by the score of 11 to 0. The cane rush never *did* amount to much.

On the 23d of the same month happened an historic event in the shape of the first meeting of our orchestra. I am unable to find any subsequent record whatever of that promising organization.

One beautiful day towards the close of the first term, Professor Bartlett held a private reception in his new office, publicly known as the mathematical library. The results of the first semiannual examinations did not bear close inspection for some of us. On looking over the registration list at the commencement of the second term, it was discovered that quite a number had found the climate of Cambridge more compatible to their temperaments than that of Boston.

It was during the second term of our Freshman year that we heard rumors of a grand scheme which the Institute Committee had been secretly fostering for no one knows how long. The curiosity of the entire student body became so great that the committee was forced to announce that the Institute had given it the use of a 2 x 6 room in Rogers Building, which was to be elaborately decorated, and where all the banners, cups, flags, photographs and other emblems of victory which any one had ever won, could be brought and suitably placed for exhibition purposes. Prominent athletes and others were asked to bring their trophies at once and to turn them over to this committee for the above purposes. The room was christened "The Trophy Room" by the committee.

In looking over the athletic summary for the year, it is found that Jack Horr has won the greatest number of points for our class, and ranks second in the total number of points won by an undergraduate.

Bobby Pope also established an enviable reputation as an all-round athlete.

As a fitting close to our military exertions, we held a competitive drill late in the spring, invited representatives from various *large colleges* in New England, and offered a cup valued at \$82.25. In order to make this drill an annual function, we required that three successive victories must be won by the same school for the absolute possession of the cup. With the customary three-hour "quizzies," our first year at the Institute came to an end. We had learned many things besides analytic and descriptive geometry, and had shown the Institute and upper classes that great things might be expected of us.

Our Sophomore year opened amid intense excitement. It was whispered around that the Knight of the Treasury had received several hundred thousand dollars in cash, and would cash sworn checks for amounts not exceeding five dollars. By means of a two-dollar check we found that the rumor was false, and finally traced its origin to some massive and very inartistic iron gratings which had just been placed in the two windows in the front of this building.

Shortly before Thanksgiving we humiliated the Freshmen by defeating them both in the football game and cane-rush. In football the score was 39 to 0. Without looking up the matter very carefully, I think this victory is the most decisive one in the annals of interclass football.

There seems to have been an ominous lack of class events during the succeeding winter months; perhaps because double F. H. published his first poem sometime during that period.

To the great disappointment of the newspapers, the *Technique* Electoral Committee election took place without loss of life. Naughty-three take notice!!

It is my sad duty to record an unpardonable act of utter disrespect and sheer ruthlessness on the part of a respected member of the Faculty. In defiance of a communication from the secretary of a mass meeting of all the good citizens of North Adams, a professor of geology and a few students went to North Adams on Sunday, strolled about the neighboring country, and actually looked at a few rocks which lay on the surface of the ground.

In April it was announced that Henry Smith Pritchett, at that time head of the United States Geological Survey, was to become Technology's president the succeeding fall.

This was our banner year in athletics. We won the spring meet, placed second in the general summary for the year. For this good showing we owe much to Pope, Frost and Bob Brown.

Less than one-half of our entering class of four or five hundred reported for duty in the fall of 1901. We felt rather discouraged and lonesome at first, until another poem from the immortalized slate pencil of Freehand Hunter and the receipt of two unframed photographs for the Trophy Room, dispelled our many ills.

Strictly "1902" historical facts were few and far between during the first term. We were evidently gathering physical and financial strength for the social features of the following term. Only three weeks apart, two public events occurred in the fall, which were of more than usual interest. I refer to the placing of a bust of General Walker in the Public Library and the inauguration of Dr. Henry S. Pritchett as president of this institution. May this recognition of the nobleness and true worth of General Walker be often repeated, and may many years elapse before the occasion shall arise for another inauguration.

At our class dinner held in March of that year, we had the honor of starting the undergraduate movement of subscriptions to the Walker Memorial Fund.

Junior Week came at last, with its full quota of work detractors. *Technique, 1902*, achieved all the distinction befitting its title. Owing to the aid of "Bug H." and "Doggy B.," the Prom. at the Algonquin Club gratified the desires of the most fastidious "fusser." The Musical Clubs' concert and dance never was so popular, and the usual number of teas and receptions filled in the gaps between the affairs just mentioned. And all this was accomplished in spite of a continual downpour of rain from Monday until Saturday (twelve to one on Thursday excepted). THE girl, the unpaid bills and the recitation cuts were the principal passwords of the week after. The "finals" were too near at hand to allow of further "history-making" that year.

The Senior, when he becomes such, usually changes his student life to a considerable extent. The B.S., for which he has been striving for three years, suddenly appears more tangible and more nearly within his reach. Furthermore, he has no upper classmen to look up to for advice or imitation. Consequently he strives to pass off what conditions he has incurred,

and to so conduct himself that the lower classmen may in turn look up to him. The requirements of the Senior year exact the most strict and assiduous attention on the part of the student. In addition to his regular studies he must decide upon and successfully perform a thesis which needs his most careful and original thought and skillful labor, as this is to a considerable extent an index to the engineering ability he has acquired during his four years of scientific training.

With these ideas in view it is evident that the Senior has but little time to engage in the student interests which are not prescribed in the different courses of study, and to advance which he should have contributed his share during the first three years.

Mention should be made, however, of the "Senior Portfolio," which was published less than a month ago. The members of 1902, who comprised the board of publication, are to be congratulated on the excellence of their work. Their efforts are the more praiseworthy in that the brunt of the work came at a time when their regular course work was by far the most arduous and constant.

This does not profess to be a complete history of the Class of 1902, but rather the skeleton, made up of the more salient facts and occurrences with which we were either chiefly concerned, in which we had the pleasure of participating, or which we witnessed. During the past four years we have had many new experiences, made many mistakes and learned many new things. Let us profit by these mistakes, and retain what we have learned as a basis for an even broader education and more extended knowledge. Then will our future individual histories follow out their auspicious beginnings, be a credit to our Alma Mater and worthy of ourselves.

*Mr. Cates, introducing the Statistician:*

Generalities, while necessary to form a clear conception of the whole, make no lasting impression on the mind. If one wishes to emphasize an idea, he finds details of great assistance; indeed, a necessity. For these details, I now refer you to our statistician, Mr. William Jason Mixer.

**Mr. Mixer:**

MR. PRESIDENT AND FELLOW-CLASSMATES: The position of statistician of the class is not an easy one. His path is set with thorns, and not the least of these

is the blow his pride receives when he gets back his statistics blanks and finds that the members of his class have revenged themselves for his impertinent questions by putting him down for all the undesirable traits.

From these blanks and from other sources I have been able to collect the following facts :

When we began four years ago our class numbered 301. To-morrow 192 will graduate, and of these, 25 did not start with the class, showing a loss of 134.

The average weight of the class is 149.53 pounds, and although this is not excessive, it simply shows that we make a good average ; if we only had a few more men like Boardman, the mighty architect, and a few less like Goldenberg, his running-mate, we would go down to posterity as a class of giants.

Our average height is 5' 9.53", which is about right for our weight, showing that as a class we are neither too fat nor too thin in this respect, as in all others, being the finest class that ever went to Tech.

When we come to shoes, it is quite evident that we all of us have good understanding, for the average is 7 $\frac{3}{4}$ . This seems all the larger when we think that if these shoes were all put in a row, they would reach from this room to Chapel and back again.

In regard to our expenses, we are again a winning class, reaching from the limit of \$450 per year to \$3,000. This latter limit is put down by a man who boasts that he got a degree without knowing how to add up a column of figures, so that it is perhaps a little high. Neglecting this one, therefore, we get an average of \$703.52.

We are in many ways a hard-working class, and it is interesting to note that 65% of us have had a summer occupation while at Tech.

Another point, which until this time has been of vital importance to the members of the class, is the number of I's which each man has received. Here, however, I find a great difference of opinion. From the before-mentioned statistics blanks I obtained an average of 1.902. These figures may be very patriotic and show good class spirit, but from sad experience I thought that it was a little low ; so by judicious use of the class funds I obtained access to the archives of the secretary's office, and from these instruments of torture I learned that the secretary calculated an average of 4.21. Which is correct, I would not dare to say, but leave it to the judgment of those present.

Another thing which might be interesting to note, is that the number of evenings a week spent in fussing is very low, being only 1.3. From these last two sets of figures I have been able to plot a curve whose abscissæ are +s and whose ordinates are evenings spent in fussing. This curve I think shows very plainly that fussers are not the best students.

It is an interesting fact that our class is a progressive one, for only 8% of its members are the sons of college graduates. Only about 35% of the class wear eyeglasses, while 55% smoke and 45% sometimes visit Chapel. The smokers are about evenly divided between pipe and cigars as the favorite, and beer seems to be the best-liked beverage. This accords exactly with the views of the president of this institution.

The class is very varied as to the favorite form of amusement, but apparently theater-going is the most popular, although loafing seems to be quite general.

The most popular man in the class is Mr. Charles Adrian Sawyer, with Cates as a close second. This is a most gratifying announcement to make, as both of these men have shown great interest in class and Institute affairs, and have good reason to be so honored.

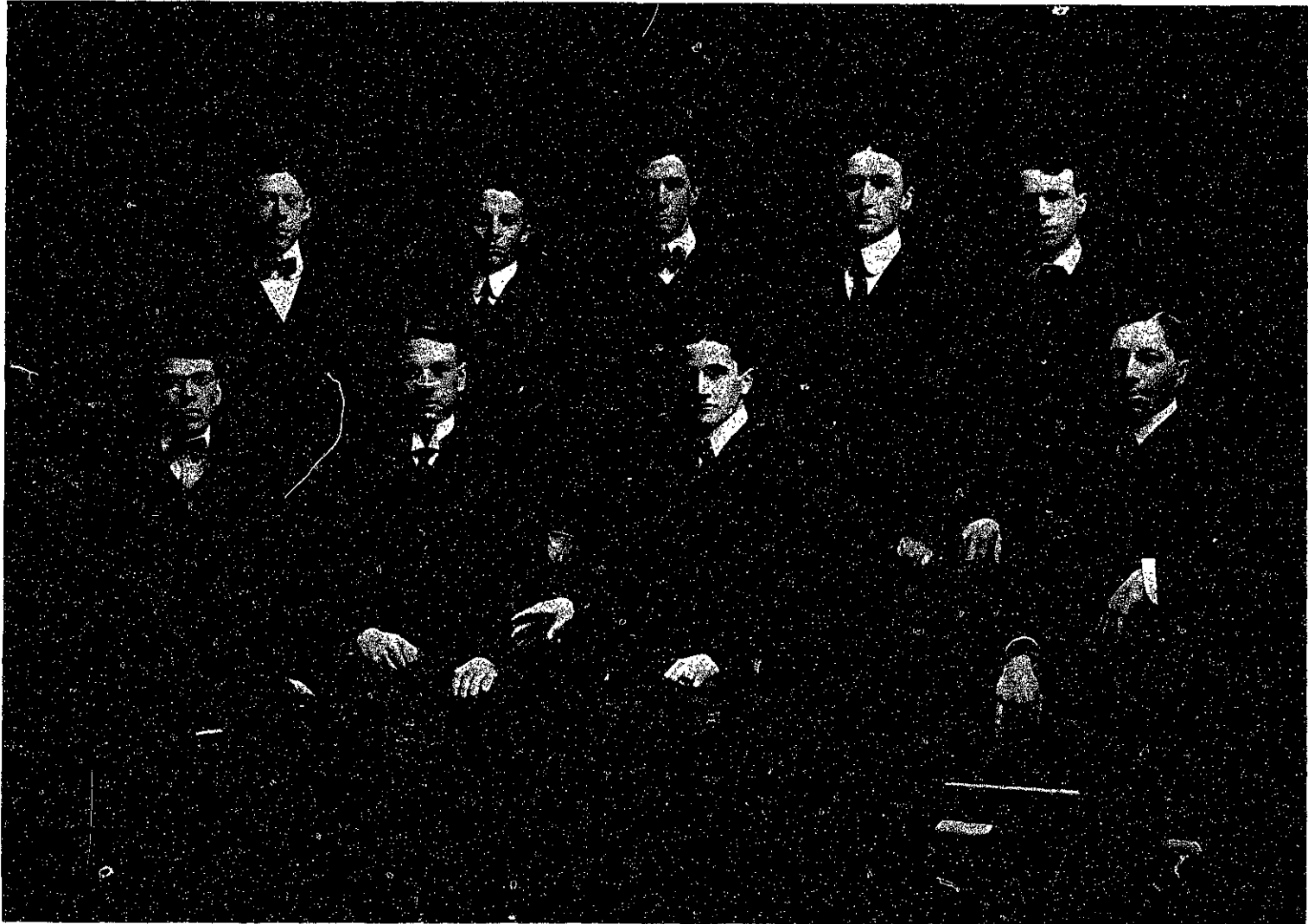
The handsomest man in the class is said to be Mr. Charles G. Mixer. Of course I think that the Christian name should be changed in this respect, but I must stick to the vote of the majority.

Our average age is 23 years and 10 months, and our youngest is 20 years and 1 month. He was always supposed to be Greeley, Freehand Hunter's pet, and the architects even went so far as to give him a dinner on his twenty-first birthday ; but Greeley, like many other hopeful infants, has had his nose put out of joint, for the "Portfolio" shows that he is beaten by nearly a year by one who is not only young, but handsome.

Wales is by all odds our worst grind, and Paraschos is the class sport, although Proctor gave him a close rub.

J. L. Taylor has distinguished himself by being the greatest bluffer, and Pitts, by general acclaim, is the dopiast.

H. S. May wins with the greatest ease in the matter of fussing, although J. R. Morse is also a great favorite with the ladies, while L. E. Williams is the vainest.



CLASS-DAY OFFICERS.

There were many candidates for the position of homeliest man, but Tom Shedd won, although our worthy president here does pretty well in that line himself.

By careful observation I have arrived at the conclusion that 25% of the class shave every day, 50% every other day, 24.9% every third day, and Tom Shedd shaves Sundays. This may account for the ease with which he won the competition for the homeliest.

When we come to the lovely ladies in our midst, we find a remarkable unanimity of opinion. Miss Beckler is the handsomest, and also the most popular. As to the homeliest, the best of it is that there are no homely ones.

During our last term at the Institute there has been a large amount of very important research work done by the members of the class. Perhaps the most far-reaching of this was done by Mr. B. G. Philbrick, a worthy member of Course VII. His thesis was an attempt to change the iron constituent of hens' eggs by altering the diet. I need not say that he was successful, for this specimen of the hen-fruit, which I obtained by bribing the janitor of the Pierce Building, will speak for itself. During this work he has made what the architects and others who have taken sanitary science, speedily recognized as a smoke nuisance, and a careful statistical study was made of its effects on the health and prosperity of the architect by Mr. B. W. B. X. Y. Z. Greene, one of the bright and shining lights of Course IX.

The result of this work is most remarkable. It shows that the smoke has by some mysterious power spurred the Course IV. men on to great efforts, and it appears at present as if even Freehand Hunter would get a degree. He was so stirred up by the smoke of Philbrick's crematory, that he has made a design for a new Administration Building for the Institute, with a special padded-cell in the tower for all such misguided youths as Philbrick. Another architect who has been spurred on to fame and fortune, is P. R. Whitney; he has followed Philbrick's example, and has designed a crematory which is to be built with special facilities for roasting professors, particularly Harry T. and Getty.

Arthur More, the class dude, has been doing a bit of research work on the preservation of wooden ties. He always wears wooden ones himself, and says that

they are better even than made-up ascots; but as they wear out in a few years, he is trying to find some way of renovating his large supply.

J. L. Taylor is working on Loads on Bridges, and we have it on good authority, that he has "Stood on the Bridge at Midnight" many times this winter, trying to find out how much of a load he and, incidentally, the bridge could carry.

Perhaps the most original piece of work of the year has been done by J. W. Ballard. His specialty has been yarn-testing, both his own and other people's, and the result is that he has bored every one around the 'stute to such an extent that there is a general exodus whenever he appears.

I have to announce that two members of the class have been so rash as to become engaged. One is Mr. A. E. Hansen, who will be the first to get married. Good luck to him! We may be buying a loving-cup for his family before we do so for any other. The other engagement is not out yet, but I have it on the best authority that Hercules Wallace Geromanos, the well-known woman-hater of the organic lab., is engaged to a co-ed.

In closing, I will say that our class has in every way been a shining example for other classes; that we have always stood in the front rank of every department of college life, and that the professors are so sorry to have us go, that they are making dewdrops of a few of us to increase the standard of excellence in the graduating class to come.

*Mr. Cates, introducing the Prophet:*

Even in the olden days no community was sufficiently satisfied with their present, and to gratify their curiosity they were content to allow themselves to be almost knowingly deceived. With us there is no chance for deception, for our seer has, by a long series of calculations, removed all doubt. He looks into the future as easily as we do into the present. In order that you may know the results of his work, I introduce to you our prophet, Mr. Carlton Brigham Allen.

Mr. Allen:

A few days ago I received a letter from my friend Billy Durgin, containing much interesting information regarding himself and the boys who graduated from the Institute with us.

In one part of the letter he tells of his own suc-

cess: how he started in to work for a large electrical firm, until after a few years matters were reversed, and the company began working for him; then in another part of the letter he writes:

"The twenty-five years since our graduation have passed quickly to me, and I think it has to most of our fellows, for we were trained to look at life in the right way. One of the chief advantages of our training was the knowledge gained of our fellowmen; we learned to 'Rub shoulders with the rank and file,' and we began our practice early in our course, as early as the first Wednesday afternoon. We were at the Institute during our most impressionable years, when our strongest and most lasting characteristics were formed and developed. Take, for instance, Currey and Proctor,—they are still in politics, and strange to say, still in opposing factions. Only yesterday they had a debate in the Senate on the Brazilian annexation question. Currey claims that the country should be annexed directly, while Proctor is in favor of appointing either Cates or Seabury as temporary governors. However, I think Lombard will be finally appointed to the position, as he is more familiar with those South American countries through his long residence there, and Cates and Seabury are too valuable men in the West for their professions to lose.

"Weeks tells me that new electrical railway constructed by Hooker and Lage will develop Brazil to a great extent; and so it should, for it connects most of the South American cities with our chief cities, opening up much valuable country. Weeks is president of the road, and it is already on a paying basis. Hall is also connected with the road, and has been since it started. After leaving the Institute he let his hair grow for a while, but changed his mind and went into the air-compressor business, with the result that he has installed and now has charge of all the plants of that description belonging to the railway. His most recent invention—an improved type of air liquefier—has met with immediate success, so that he is at present supplying nearly all the tropical cities on this continent with liquid air for cooling purposes. There is, however, one bad feature connected with his cooling system. It prescribes that the cooling pipes shall be run along the sidewalks on the side next the houses, and people insist in building their refrigerators out over the sidewalks.

"Starr and Fitch have also been experimenting with

liquid air, and have apparently met with considerable success, for their most recent types of automobiles are equipped with liquid-air motors. I saw Fruit driving one along the street one rainy day a few weeks ago, with several little 'Horace' Greeley's skating after it. It certainly looks as if the Mrs. King Course IV. combination has at last been dissolved.

"You must have read of the vast changes that have taken place in the Institute since our departure, and so had I, but I did not realize their true magnitude until my recent visit to the little town where the Institute is now situated. The new buildings are not beautiful from an architect's point of view, in spite of the fact that they are the work of some of our architects, yet they have a substantial appearance not unpleasing.

"The new gymnasium is, however, an exception. As this building is viewed from across the campus—a real campus, and not a farce—it is very imposing, covered as it is with pagodas and transformed catenaries. The exterior design is the work of Hunter, and the interior decorations are the work of Boardman and Goldenburg. Boardman did the ceilings and Goldenburg the floors.

"On the day of my visit the list of eligibles for the Class Day election had just been posted, so I joined the crowd around the bulletin board. Yes, down on the list was the name of Lockett, unopposed, and a little lower came the names of four Mixters in succession.

"In the reading-room I picked up the theatrical number of THE TECH, and among the extracts from this year's show I came across a short but pithy poem entitled: 'Steve Gardner's been bald for quite a while.' It was the pathetic story of his unfortunate career since becoming professor of modern languages at the Institute.

"Amongst the advertisements Nash and Marvin were setting forth the advantages of their forms of gas and hot-air engines, Capen was explaining why his was the only electric vehicle on the market worth the trial, and Brodie was recommending the latest bills at his theaters.

"My reading was disturbed before long by the words: 'If your attendance card is in, I have to inform you that you are a candidate for graduation.' The speaker was no other than our old friend Millar,

in a long brown beard, masquerading as secretary of the Institute. In his account of himself he told me he had started as a star in a revival of 'Little Lord Fauntleroy,' but due in part to his physical attainments, he had not met with success. Later he had tried 'William Tell,' but with the same poor result. He was so unfortunate as to engage Cutter as the target with the apple in the shooting scene, not knowing at the time his fondness for apples.

"Millar told me he had met during his theatrical career one known as 'Mud' Comins, far famed for his mud-bath treatment, but a poor actor because of his lack of confidence on the boards.

"Since my visit to the Institute I have seen several of our classmates. Wales called on me the other day. He said he had thought of going to the British Isles for a time, but Mrs. Wales finally persuaded him he was quite as much in his element at home. According to Wales, the steel business has been doing well by Wright.

"It seems odd to me, as I look back upon it, that all of us should be so suddenly brought together as we were at the Institute, and then after four years of comradeship should lose sight of each other almost as suddenly. Some of us have realized our former ambitions, and some of us have been compelled to form new ones; but, at any rate, all of us have had ambitions, and have gained experience in trying to live up to them."

Here the letter closes with a postscript to the effect that Bobby Pope returned to the Institute and graduated, being fully as popular with his fellow-graduates as with us.

*Mr. Catcs, introducing the Orator:*

The most difficult work for man is the living up to an ideal. We know that no man has ever accomplished anything without some fixed standard. With one man it is one thing; with another, another. It has been the duty of the Orator to gather together these standards, and from them to make a composite, which he will present to you as the ideal of our class. It is a pleasure to introduce our Orator, Mr. Isaac Rayne Adams.

Mr. Adams:

MR. MARSHAL: A host of sentiments and premonitions arise at the thought that this is the last day of our undergraduate life. In saying this no new word is

spoken; our experience is the experience of countless classes who have gone before, and of many more who will come after. The importance of the day of graduation has often been dwelt upon; it has been signalized as the day that the undergraduate passes from the guiding control of his Alma Mater to face his fortunes in the cold and unreluctant world alone. How familiar is the figure of speech in which the student is compared to the well-equipped gladiator of old, stepping down into the arena,—not of Rome, but of Life. Nor do I wish to detract from what force there is in that figure of speech. Yet there is in it that mistake of over-glorification which leads one to wrong conclusions and to false ideas . . . We are all to-day in an attitude of gratefulness, and it is just that we should be. The Institution which we are glad to be able to acknowledge as our Alma Mater is doing a work in the world the worth of which is everywhere acknowledged. Let us, at this time of success, guard ourselves from overpraise. The graduate has been compared to the well-equipped gladiator; let us make no such mistake as to call him a broadly educated man. . . This is no attitude of petty criticism. We too often think that the education of a man is assured by his college degree. There is that at the present time perhaps it is owing to the tremendous impulse given to industrial training in the last few decades—which causes many to regard the technical school training as the alpha and omega of education. People of to-day are rather prone to look back on the old academic institutions of the past century with a certain pity, a certain supposition that their work has been supplanted. We hear much now of great financial enterprises, of vast engineering schemes of almost incomprehensible manufacturing projects; and at this prosperous time the race for wealth sends men and youths into industrial pursuit and industrial training. The academic world is forgotten. Latin is well enough,—but Cicero was not a bridge-builder; acquaintance with Greek learning was desirable, perhaps, a century ago; now the demand is for engineers. Greek sculpture was excellent, but we have time now only for plaster-of-paris statues.

When we are confronted, then, with the fact that we are taking our leave of our Alma Mater, let us pause to think of what we have gotten. Though much has been accomplished, and that in the face

of great difficulty, under conditions which have demanded the exercise of courage, integrity and great work,— for such is the history of Technology,— yet it is well, on an occasion like this, to look not alone upon what has been done, but upon that which remains to be accomplished. To the courageous, to the enthusiastic, here, in the prospect of the future, is the inspiration of the present. . . . Let not our profession of loyalty blind our eyes to the possibility of improvement, nor to the value of criticism. For if the justification of criticism is given in the rectification which follows it, and if the realization of a fault, of an error, of a misjudgment, is the first step towards the establishment of better things, then the realization of the deficiencies of the Tech graduate is of primary importance for him as for others in the final expression of a more desirable manhood.

Men are made differently, and generalizations upon character are difficult to draw. The Tech graduate, in the main, lacks neither earnestness nor intelligence. His deficiency lies in the narrowness of his intellectual sympathies. True it is that from the Institute he may learn to override and overcome such deficiency. The young student who comes to the threshold of this great educational institution is, how often a mere boy, unused to the customs of the industrial world, his sympathies bounded by the limits of his local life. What lesson he draws from Technology must depend largely upon the man. On the practical side of things he can hardly fail to be impressed with the value of systematized knowledge, of method, of industry. If he have the right measure of broad appreciativeness and balance of mind, he will translate his practical impressions of this activity into spiritual terms, and he will weave for himself a rule of life in the intellectual and aesthetic world as he does in the industrial. Such is the opportunity which the activity, virility and earnestness of the Institute present. But let us not forget that for one who thus succeeds, there are scores who do not. Mark the difference. The man who has wrought out for himself a system of principles consistent with his standards, will be, other things being equal, a leader where others are led. He will be enthusiastic where another is listless; his ambition and intellectual conviction will enable him in some measure to realize his ideals, whereas the other will be cold, stagnant and unaccomplishing.

What, then, is our education? Impressed with the vital activity of the industrial system, the student throws himself into his work, and with that earnestness of character which is now a tradition and fact at Technology, narrows his interests to that side of technical work which touches him most closely. The liking for the arts of life, for poetry, for music, for philosophy, is largely lost.

Where is there any breadth in this? Does Technology exist simply to produce units in a great industrial system, or is her purpose that of education, the recognition of the personal, the subjective, the *priceless*, in every student? We must see in our Alma Mater more than we have seen in the past, and more than we see to-day. Where is that breadth of development where so many would be unable to say who Dante was— who know King Lear only by name, and Swinburne by less than that; who find their intellectual demands satisfied by the latest fiction? Where is that dignity in the right of citizenship where almost nothing is known of the governments of the past, of the rise and fall of nations dead? What is the value of his partisanship in this or that faith, religious or political, when one knows not the basis of his partisanship?

The work of the student of Technology lies largely with things of practical concern. This may be well; but let us not be deceived. Let us not forget the importance of the intellectual life and of the primary of principles. We speak of a *broad* education. Let us realize that a broad education is a consistent education, the expression of a man's full development of intellect. Under such an education a man's sociology, his politics, his religion or philosophy, his ethics and æsthetics should be all interdependent, consistent with the intellectual standards of the man. I lay down no law; believe what you may, only make your thoughts consistent, your principles co-ordinating. The work of the Tech student in life is not alone to construct bridges, nor to determine reactions, nor percentages of ore, as such. Nor is it simply to live. The work in life is to live well; to broaden one's sympathies and enlarge one's horizon.

It will be asked, How is it possible to take the time for such a broad scheme? There should be no *taking* of time. The demands for such an intellectual consistency are primary. Having decided this, let other things take what time they may. If we live too fast,

let us live more slowly than less well. Sixty years ago Emerson said: "Forewarned that the vice of the times and the country is an excessive pretension, let us seek the shade and find wisdom in neglect." The goal before us is that equal development of mind which flows from persistent self-criticism. As in the work at Technology, exactness of results has been obtained through processes of continual checking; so let every inspiration, every intuition be checked in the same way, before it is acted upon. This, the lesson which Technology has enforced upon us, is the keynote to the development of character. And if this principle has not been enough insisted upon outside our practical work, if it is true that we have barely learned the lesson, if at all, nevertheless it is true that in no way in days to come can we more honor our Alma Mater than by the pursuit of this ideal.

Let us, then, not forget our great and lasting debt to our Alma Mater: to that Institution which has enabled us to broaden our interests in life; which has helped us to form our ideals; given us friends to strengthen us, and brought to so many of us the first and most important realization of our weakness. She has not given all, but she has given much, and our gratitude is hers. Let us remember from her industry, her activity and her strength, the lesson of consistency, which has been the secret of her success, as it will be the secret of such as attends us. Above all, let us in this teaching of Emerson recognize the last word of wisdom: "A political victory, a rise of rents, the recovery of your sick, or the return of your absent friend, or some other favorable event, raises your spirits, and you think good days are preparing for you. Do not believe it. Nothing can give you peace but yourself. Nothing can bring you peace but the triumph of principles."

*Mr. Cates, after the Orator:*

FRIENDS AND CLASSMATES: We have now finished the first portion of our exercises of the day. And in behalf of the class and those who have taken part, I wish to thank you heartily for the attention you have given and for your kindness in spending this afternoon with us in our final gathering as undergraduates, as the whole class of 1902 may never have the pleasure of welcoming you again.

### Commencement Day.

The exercises of graduation took place on June 10 in Huntington Hall. The theses were read in the following order:

#### COURSE I.

Henry McBurney, A.B., "Tests of Bridge Rollers." (With A. T. Nelson.)

#### COURSE II.

James Duane Ireland, Ph.B., "Tests on Steel Rivets."

#### COURSE III.

Waldo Hunter Comins, "A Study of Calumet Slimes." (With L. S. Cates.)

#### COURSE IV.

LeRoy E. Kern, "Design of a Museum of War."

#### COURSE V.

Hercules W. Geromanos, "An Analytical Investigation of the Products of Hydrolysis of Starch by Acids."

#### COURSE VI.

Gardner Rogers, "Test of the Generating Plant of the Brockton & Plymouth Street Railway Company."

#### COURSE VII.

William Jason Mixer, "An Investigation of the Relationships of Bacillus Coli Communis and Certain Lactic Acid Bacteria."

#### COURSE IX.

Everett L. Upham, "The Operations of European Terminal Top Markets."

#### COURSE X.

Franklin Tinker Root, "The Study of Mercerization of Piece Goods."

#### COURSE XI.

Donald M. Belcher, "The Study of the Bacterial Action of a Sceptic Tank."

#### COURSE XIII.

Everett Owen Eastwood, "A Launching Experiment."

### List of Graduates.

It has been voted by the Faculty to confer the degree of Bachelor of Science on :

#### COURSE I., CIVIL AND TOPOGRAPHICAL ENGINEERING.

Francis Deane Avery, Howard Baetjer, William Manning Bassett, Charles Judson Bonnemort, Erastus LeRoy Brainerd, Walter Havens Farmer, Harold Hervey Fletcher, Kenneth Crothers Grant, Lester Clark Hammond, Albert Eaton Lombard, Henry McBurney, Francis Joseph Mague, Arthur Smith More, John Russell Morse, Arthur Thomas Nelson, George Paul O'Connell, George Theophanes Paraschos, Harry Bradford Pond, John Howard Redfield, George Tilley Seabury, James Woodberry Smith, James Loockermann Taylor, Jr., Warren Crosby Taylor, Conrad Wendel.

#### COURSE II., MECHANICAL ENGINEERING.

Clarence Mason Allen, Henry Allison Ames, Cecil Bancroft Annett, Joseph William Ballard, Norman Easton Borden, Francis Bradley, Matthew Brodie, Harry Beaver Canby, Arthur Luke Collier, Harold Young Currey, Edward Henry Cutter, Jesse Jennings Eames, Walter Spencer Fitch, John Mark Fitz Gerald, Richard Lincoln Frost, Francis Brisbane Galaher, Howard Nelson Hunt, John Albert Hutchinson, James Duane Ireland, Charles Wetmore Kellogg, Jr., Frank George Lane, Kenneth Lockett, James Joseph Mahar, John Reginald Marvin, Herbert Schaw May, Robert Mayo, Jr., Arthur Henry Nickerson, Earl Phelps Pitts, Hyde Richmond Place, Edson Thompson Pollard, Andrew Eliot Ritchie, Frank Ambrose Robbins, Jr., Walton Harvey Sears, Clarence Douglass Starr, Horatio Ward Stebbins, Charles Clark Stover, Edwin Whitman Sturtevant, Theodore Howard Taft, Otto Conrad Thanisch, Willis Harvey Towne, Henry Otis Trowbridge, Paul Weeks, Henry Wilmarth Westcott, Wade Lyndon Wetmore, Louis Ezra Williams, William High Williston.

#### COURSE III., MINING ENGINEERING AND METALLURGY.

George Bright, Jr., Charles Henry Burr, Louis Shattuck Cates, Waldo Hunter Comins, Harle Oren Cummins, Frank Joseph Eager, Thomas Witherbee Foote, Charles Bertram Hollis, Benjamin Edward McKechnie, Arthur Harold Sawyer, Charles Adrian Sawyer, Jr., Charles Hamilton Sisson, Charles Alfred Smith, Orlando Sargent Stockman, Lowell Bosworth Wilder.

#### COURSE IV., ARCHITECTURE.

Isaac Rayne Adams, Alfred Warren Allyn, Homer Eugene Bartlett, Charles Henry Boardman, Jr., John Clyde Fruit, Maurice Goldenberg, William Roger Greeley, Frederick Huston Hunter, LeRoy Eskridge Kern, Harry George Koch, Ernest Boyd McNaughton, Arthur Richardson Nichols, Walter Purton Ross Pember, Gilbert Townsend, Louis Edgar Vaughan, Walter Jesse Wellman, Philip Richardson Whitney, Austin Clarence Wood.

#### COURSE V., CHEMISTRY.

Edna May Williston Best, Arthur Robert Gregory Booth, Harlen Monroe Chapman, Lloria Robinson Culver, Laurent Esaie Daloz, Duncan Rogers Franklin, Hercules Wallace Geromanos, Abel Martin Hamblet, Samuel Colville Lind, John Rice Mardick, Philip Coombs Pearson, Herbert Leslie Sherman, Edward Cordon Thatcher, Robert Seaton Williams.

#### COURSE VI., ELECTRICAL ENGINEERING.

George Raymond Blodgett, Bernard Winslow Capen, Lawrence Gardiner Coburn, John Lee Curtiss, Harold Henry Davis, Joseph Wilber Durbin, William Andrew Durgin, Alfred William Friend, Ralph Percy Gifford, Emanuel Gorfinkle, Elmer Merrill Hervey, James Carleton Howe, Floyf Byron Hull, Edwin Elliott Kimball, Antonio Martins Lage, Harold Davis Larrabee, Charles Shelley Lawson, Frederick William McIntyre, William Hugo Matthies, Byard William Mendenhall, Humphreys Milliken, Robie Walter Morrill, Edwin Eugene Nelson, Newell Caldwell Page, Pierre Barbeau Pendill, Fred Chesley Randall, Irving Wood Reynolds, Gardner Rogers, Nathaniel Sprague, Jr., Henry Stanton Bogue Stimson, Arthur Eugene Swan, Ralph Emery Thurston, Charles Prescott Tolman, Wilbur Lewis Vatter, Robert White, Jr.

#### COURSE VII., BIOLOGY.

Edith Arthur Beckler, Charles Galloupe Mixer, William Jason Mixer, Burton Garfield Philbrick, Eleanor Packer Rathbun.

#### COURSE VIII., PHYSICS.

Beulah Chapin Hill, Cora Stella Hopwood, George Everett Marsh, Jr.

#### COURSE IX., GENERAL STUDIES.

Bertram William Batchelder Greene, Russell Bryant Lowe, Everett Lyman Upham.

## COURSE X., CHEMICAL ENGINEERING.

Harold Otis Bosworth, Robert Vaughan Brown, Arthur Parker Hall, Charles Emmett McCarthy, Frank Kollock Mitchell, Arthur Edgar Nash, Franklin Tinker Root, Royal Linfield Wales, Charles Lawrence Wright.

## COURSE XI., SANITARY ENGINEERING.

Donald Minor Belcher, Francis Jerome Field, Farley Gannett, August Ernst Hansen, George Everett Mather, Chester Harold Wells, Rufus Mason Whittet.

## COURSE XII., GEOLOGY.

## COURSE XIII., NAVAL ARCHITECTURE.

Carlton Brigham Allen, Allen Lansing Appleton, Everett Owen Eastwood, Harold Arthur Everett, Henry Abbott Ferrin, Archibald Gardner, Stephen Ayrault Gardner, Jr., Leslie Walker Millar, Claude Eldred Patch, Winthrop Merton Rice, George Morton Spear, Walter Owen Teague, Elisha Walker, Charles Franklin Willard.

It was voted to confer the degree of Master of Science on:

Robert Rhea Goodrich, William Gordon Holford, Langdon Pearse, Bart Ernest Schlesinger, Louis Richard Henrich, Ellis Fuller Lawrence, William Clifton Phalen, Julius Edward Ober.

### The Cabot Prizes.

This year the Cabot prizes for general physical improvement were awarded to J. F. Ancona, W. C. Phalen, L. W. Adams, G. H. Clapp and J. B. Whitmore.

Although this is the second year that these prizes have been awarded, owing to the difficulty and time required to prepare suitable medals, none have as yet been presented. However, it is now expected that the successful candidates will receive them during the coming fall.

The spring measurements and strength tests at the gymnasium showed very interesting and gratifying results. The average gain in total strength of the eighty-three students whose complete record was twice

obtained, was 15 per cent; twenty-seven had gained 20 per cent, or more, and eight 30 per cent, or more. One had gained 40 per cent, and another even as much as 45 per cent. A very considerable improvement in proportions and development accompanied this great increase in strength, the most striking changes being, perhaps, the increase in chest, neck and arm measures, and decrease in depth of abdomen. With very few exceptions, the general improvement was directly proportional to the amount and regularity of the work done during the winter.

But some of the most valuable results are not shown on the charts. The improvement in general health, carriage, and increased capacity for study, as reported by the students themselves, is of the greatest significance. This increased efficiency brings home to the student as nothing else can, the value of regular and systematic exercise in connection with his daily work.

Two years ago it was announced that Mr. Samuel Cabot had promised to give \$200 a year for five years, as prizes for all-round physical improvement. He did not specify what form these prizes were to take, but suggested that medals would be suitable. The details were to be decided by the awarding committee. At the same time he offered a special prize to the Architectural Department for preliminary designs of such a medal. It was intended that the committee should use these designs only as a suggestion towards, or possibly a basis for, the final model. The awarding committee, consisting of Professor Hough, Major Briggs and Dr. G. Meylan, with the advice of Professor Despradelle, considered the successful designs; later, Professor Despradelle undertook the task of arranging for the details of a final model. It was decided that the medal must be of the highest artistic value, as well as fully embodying the spirit of its purpose. Of course

it has been no easy task to meet these requirements.

A well-known sculptor has finally become interested, and has undertaken to prepare the model for the die. We may now feel sure that the medals will be of real artistic merit, and in every way worthy of our Institute.

At the outset the committee decided to spend the greater part of the Cabot sum, with Mr. Cabot's approval, on the die, leaving enough for a fund whose interest would suffice to yearly provide five medals, these medals to be of uniform quality, because of the difficulty of determining the order of precedence among the several successful candidates.

### Mr. Dooley on the Last Lap.

BY OLEOMARGARINE W. GLUCOSE.

(With the usual apologies to Mr. F. P. Dunne.)

"How did ye like to gradyate fr'm Tich?" asked Mr. Hennessy.

"Foorst rate," said Mr. Dooley, "till I woke up and found meself slapin' on th' flure. But it was me own fault, Hinnessy; th' day before, I'd been drinkin' too freely iv th' wather in th' Tich lunch room, an' it wint to me hid. I wud like to gradyate fr'm Tich if I could gradyate afther me own fasion. F'r instance, I goes be th' Rogers Buildin' on Gradyation Day, whin I am saddinly accosted be a short man with a big hid and a black beard three sizes too large f'r him. 'Wud ye like to gradyate a little?' says he. 'With plisure,' says I; and I goes up th' stips leanin' on th' arm iv me iscorn, till we arrive at Huntington Hall. While th' band is playin' 'Hail! th' Flunkerin' Hero Comes,' we marches up on th' platfoorum, and amidst toomultuous applause seats oursilves beneath th' shade iv the palms. Have a look at th' program, Hinnessy."

1. Invocation and Prayer. Linus Faunce.
2. Song, "I Want to be a Literary Man." Arlo Bates.
3. Siliction on the Jew's-harp. THE LOUNGER.
4. Imitation iv a Sick Elephant Runnin' Uphill. Freshman Band.
5. Diclamation, "If I Were King." Janitor Jack.  
Intermission, Tin Minutes, Standard Oil Time.
6. How to Run a College Paper. Subscribers of THE TECH.  
(Iditors will please rise.)
7. Original Raysearch Paper. Charles Cross.  
Subject, "Th' Optical an' Mitaphysical Ixplanation iv th' so-called Goo-goo Eye."
8. Song, "I Wonder if She's Waiting." Justus Erhardt.
9. Readin', "How Johnny Earned His Litter Plates." Charles Adams.
10. Rayfrishmints an' Awardin' iv Diplomas.

"At this point me guard iv honor says to me, says he, 'What coorse wud ye like to gradyate fr'm?' says he. 'I don't know,' says I. 'What coorses have ye got?' says I. 'We have thirteen coorses,' says he, 'and they are all meat coorses. Don't be bashful,' says he, 'hilp ye-ersilf; there's more out in th' kitchen,' says he. 'Thank ye kindly,' says I, 'I'll take thim all, an' bring back what I don't want,' says I. Thin we marches out again to th' chune iv 'Home, Swate Home.' That is th' way I wud like to gradyate, Hinnessy. I wud like to gradyate sittin' down."

"An' what wud ye do f'r a livin' afterwards?" asked Mr. Hennessy.

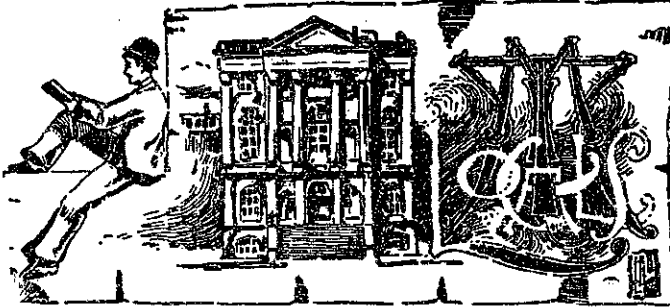
"I wuddent need to work f'r a livin'," answered Mr. Dooley; "I'd hire Tich gradyates to do th' work, an' thin I'd have someone to blame if things didn't go right. If I wanted a bridge built, I'd sind a letter to Harry Tyler, sayin', 'Plaze sind at wanst a double-actin', reversible civil ingineer. Must have no stop-motion, and need not be nickel-plated. I wud prayfer wan that is silf-startin' an' nonixplosive. I will pay f'r such a wan in weekly installmints, an' if unsatisfact'ry, will sind it back."

"Ye spake in too many parables f'r me," said Mr. Hennessy. "What does th' Tich man do annyway, th' last few days?"

"Faith, an' he does almost as much as he leaves undone," said Mr. Dooley. "In th' last few days he does ev'rything fr'm holdin' th' rod f'r a surveyor to holdin' a little hand f'r himsilf. 'Tis a varied life at th' ind iv th' year, Hinnessy, whin a man is changin' fr'm th' overalls to th' driss-suit siv'ral times. But it is worth while, Hinnessy; f'r th' Tich man will have somethin' to look forward to afther he goes home that afthernoon in his plug-hat, tryin' to hide his pink-ribboned diploma in his vist-pocket. An' think iv th' time there will be on th' afthernoon iv Class Day out on th' Rogers lawn. There they will have a chanst iv invistigatin' th' most perfect machines iver made, an' the only wans that Tich min cannot undherstand th' workin's iv. I till ye, Hinnessy, ye can't get a formoola f'r iv'rything anny more thin ye cud plot out th' curves iv th' horns iv Hogan's goat be actual misuremints.

"Afther four years' confinement at hard labor, the Tich man is at last released from bondage be th' Angel iv Work. 'Ye have fought a good fight,' says she, 'an' ye look it. Go out an' take a thrip into th' country,' says she, 'where th' milk an' honey flows.' 'Goowan,' says th' Tich man to th' angel, 'an' mind ye-er own business,' says he; 'I have a job offered me be th' New York Consolidated Dynamite Company, an' thither I go to work.' Ye see, Hinnessy, th' habit iv work has grown on him till he can't get away fr'm it without missin' somethin'.

"'Now,' says th' Angel iv Work an' Sheepskins, 'it gives me great plisure to confer upon ye on this suspicious occasion th' daygree iv Bachelor iv Science. But see that ye don't die a bachelor,' says she."



On May 24, at the chapter house of the Delta Tau Delta at Tufts College, seven men from the Institute of Technology were initiated, thus forming a new chapter at the Institute. After the ceremonies a banquet was held at Young's Hotel.

The response to THE TECH'S attempt to raise more money for the Walker Memorial Fund has been extremely gratifying. The Special Walker Memorial Number has brought in enough money, largely from its special gifts and advertisements, to pay all bills and leave at least three hundred dollars clear profit, which will be turned over to the treasurer of the fund as soon as all the various bills are settled.

Dr. James Locke (Yale, '90), at present instructor in chemistry at the Sheffield Scientific School, will come to the Institute next fall as professor of elementary chemistry. In addition to his course at Yale, Dr. Locke studied for several years in Germany, preparing himself for his present position, which he took in 1897.

Mr. Gary N. Calkins, an Institute graduate from Course IX. in 1890, has been engaged for more than a year in investigating some of the lower forms of life. He has succeeded in keeping alive a family of microscopic animalculæ through more than four hundred generations,— a biological feat of the highest order. An interesting account of Mr. Calkins's work is given in *Harper's Weekly* for May 17.

Mr. Joseph Norman Bulkley, of the class of '89; Mr. Louis A. Cary, '96; Mr. Benjamin M. Mitchell, '93; Mr. Fred E. Norton, '91, and Mr. Anthony M. Robeson, '94, are among the engineers at present in South Africa. Mr. Bulkley is the chief engineer of the United Engineering Company, Ltd., and his address is Box 1082, Johannesburg. Mr. Cary is an electrician at the Bulfontein Mine, Kimberly. Mr. Mitchell is with Fraser & Chalmers, Ltd., Johannesburg. Mr. Norton is with Sherriff, Swingley & Co., Ltd., Box 1135, Johannesburg. Mr. Robeson is a consulting mechanical engineer with Eckstein & Co., Johannesburg. His address is care Wernher, Beit & Co., 120 Bishopgate Street, Within, London, E. C.

A chapter of Phi Sigma Kappa was put in Saturday, May 24. The secret ceremonies were held in the Brunswick at two o'clock in the afternoon, and a banquet was held in the evening. There are at present fifteen chapters of this fraternity.

#### Naval Architectural Dinner.

The final dinner of the Naval Architectural Society was held at the United States Hotel Thursday, May 15. The guests of the evening were President Pritchett, Professor Peabody, Professor Havgaard, Mr. Leland and Mr. Newell. Hewitt Crosby presided as toastmaster.

As President Pritchett was unable to attend, Professor Peabody was introduced as the first speaker. He expressed the wish that the graduating class might not lose their interest in the Institute, and to the Junior class he spoke of the value of actual experience in a shipyard, and personal contact with working people.

The next speaker of the evening was Professor Havgaard, who touched upon the necessity of not overestimating one's ability in one's profession. Mr. Leland gave an inter-

esting discussion of the stability of the gun-boats "Machias" and "Castine." Mr. Newell spoke of the predecessor of the present Naval Architectural Society. Messrs. Willard and Foljambe of the alumni, and Messrs. Eastwood, Gardner, Millar and Lage of the society, were among the other speakers of the evening.

The meeting closed with music and a general conversation among those present.

#### Technology Captures Single Lawn Tennis Championship for 1902.

The third annual games of the New England Intercollegiate Lawn Tennis Association were played on the courts of the Longwood Cricket Clubs during the week commencing May 25. The games for single champion were won by Francis Bradley, Technology. In the semi-finals the two best men of the tournament, Bradley of Tech and Plimpton of Amherst, were brought together. Bradley won in straight sets, 6-4, 6-3. In the final match Bradley showed his best form and won from Herrick of Wesleyan, 6-4, 6-3, 6-1. The doubles championship was won by the Amherst team by defeating Tufts 6-4, 2-6, 6-2, 6-4. The standing of the colleges after the three years' playing is as follows: Brown, 3; Tech,  $1\frac{1}{2}$ ; Amherst,  $1\frac{1}{2}$ ; Bates, 1; Dartmouth,  $\frac{1}{2}$ ; Wesleyan,  $\frac{1}{2}$ , and Tufts,  $\frac{1}{2}$ .

#### Senior Class Portfolio.

It would be very lacking to let this issue pass without some mention of the excellent "Portfolio" which the Senior Class has published. The committee appointed by the class has been remarkably energetic in their work, and a book worthy of their best efforts has been the result. The cover of handsome leather is very tasteful in design, and the pictures inside have the usual interest to the members of the graduating class. The re-

productions are grouped eight on a page, which is in better proportion to the size of the paper than was the grouping of six on a page, in former editions. In the back of the book are a large number of interesting group pictures, which form a new departure in Portfolio arrangement. The work of compiling such a book is remarkably tedious, but the results must have fully paid the committee for their work.

#### Book Review.

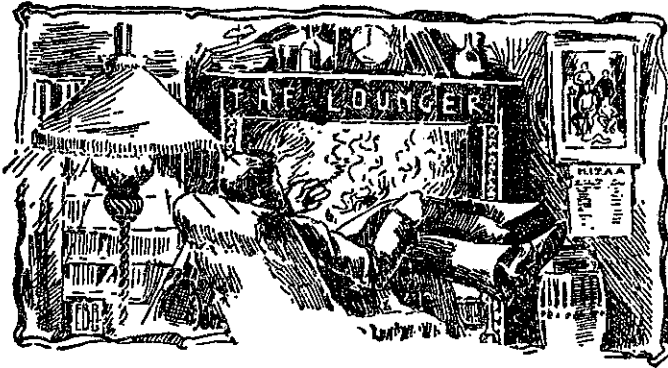
We are in receipt of a little book of weird stories entitled "Welsh Rarebit Tales," which, outside of any intrinsic qualities in the book itself, is of special interest to all Technology students, as being written by one of their number. The author is Mr. Harle Oren Cummins, who is a member of this year's graduating class.

As suggested in the title, "Welsh Rarebit Tales," the stories are supposed to be the result of the injudicious gastronomic indulgences of a certain literary club. They treat of all sorts of weird, ghoulish and blood-curdling subjects, from the manufacturing of human flesh and blood by chemical processes to a madman's horrible destruction of a floating "Palace of Sin." The tales are vividly told; in fact, if we may be permitted to criticise, we think in some places a little more might have been skillfully suggested rather than given in such gruesome detail.

However, a pleasant hour or two in vacation can be passed in reading "Welsh Rarebit Tales," and we would venture to recommend it as an additional feature of the assigned summer reading.

#### \$25 Prize.

The *Technique* Board for the Class of 1904 announces that a prize of \$25 will be given for the best cover design for *Technique*, '04. Design should be suitable for a cover 8 x 10 inches, and should be sent to '04 *Technique* Board, Cage, before Jan. 1, 1903. This competition is open to all Technology men. The board reserves the right to reject any or all designs submitted.



Just before the English exam. THE LOUNGER went into a restaurant with Arlo Bates to get a hasty lunch before the strenuous life which was to follow. For the first course the waiter brought on two bowls of a steaming something which itself seemed too thin to be very fattening. Arlo took a spoonful, pursed his lips, frowned slightly, and looked at THE LOUNGER from the corners of his eyes. He meditated long and deeply, and finally asked THE LOUNGER in a hesitating voice:

"Pardon me, but could you tell me what this is?"

"It's bean soup, sir," replied THE LOUNGER; whereupon Arlo in high indignation responded:

"I don't care what it's been; I want to know what it is!"

At Wellesley, that haven of happiness where "piece and rest forever dwell," they have unique customs which Tech men might well follow, and in truth often do follow. For instance, not long ago they had a field day, and included in the rites of the day, or the wrongs, perhaps, was an obstacle race. As THE LOUNGER understands it, the participants in this race were required to crawl through barrels, make mud-pies, carry potatoes on spoons, and other equally ridiculous things. THE LOUNGER makes and seconds a motion,

and unanimously passes the vote, that a similar race be instituted among our Faculty. This would be an excellent diversion for the professors who so often spend sleepless nights brooding over the success of this man or that man in passing the examinations.

Professors Cross and Wendell were sitting side by side correcting examination papers, and THE LOUNGER in the next room heard this bit of repartee:

"My head rings," said Professor Wendell to his companion. "Can you account for it?"

"Certainly," said Professor Cross. "It is hollow."

For a long while the silence was oppressive, and nothing could be heard but the scratch of the pens. Finally Professor Wendell asked:

"And does your head never ring, Charlie?"

"Never," came the response.

"Ah," said Professor Wendell, reflectively, "it is cracked."

And again nothing could be heard but the scratch of the pens.

EDITOR'S NOTE.—It is evident that Professors Cross and Wendell have been perusing the contemporary comic journals.

There is something sad about the end of anything, whether it is the end of life, the end of a glorious day, the end of a journey, or the end of a dollar bill. This is the last number of THE TECH this term, and THE LOUNGER is the last thing in it. That is why it is so sad to wind up the long series of mistakes known as THE LOUNGER column with a suitable sentiment. Perhaps the best thing would be to say nothing, after our editorial writer has covered the field so well a few pages back. THE TECH has long lacked a motto, but THE LOUNGER comes to the rescue and will devise one. One of our leading papers says: "If you see it in the Sun, it's so." Our motto will be revised to read: "If you see it in THE TECH, it's so-so."

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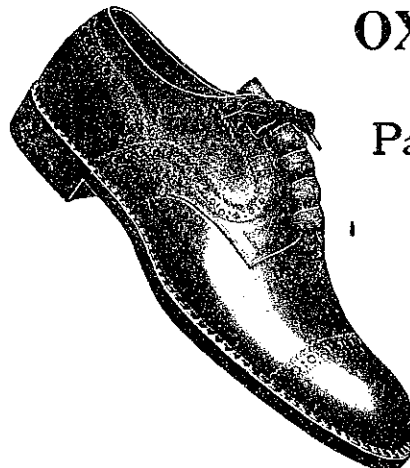
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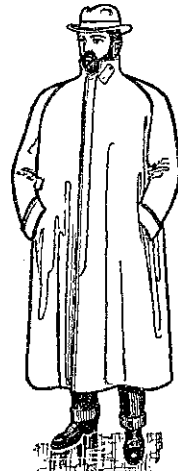
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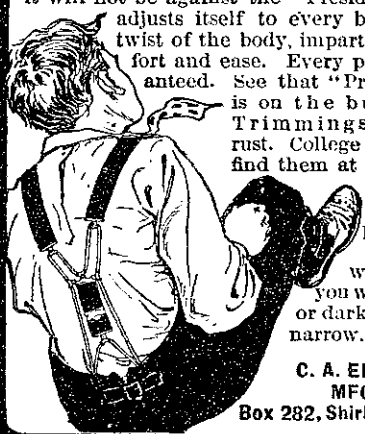
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