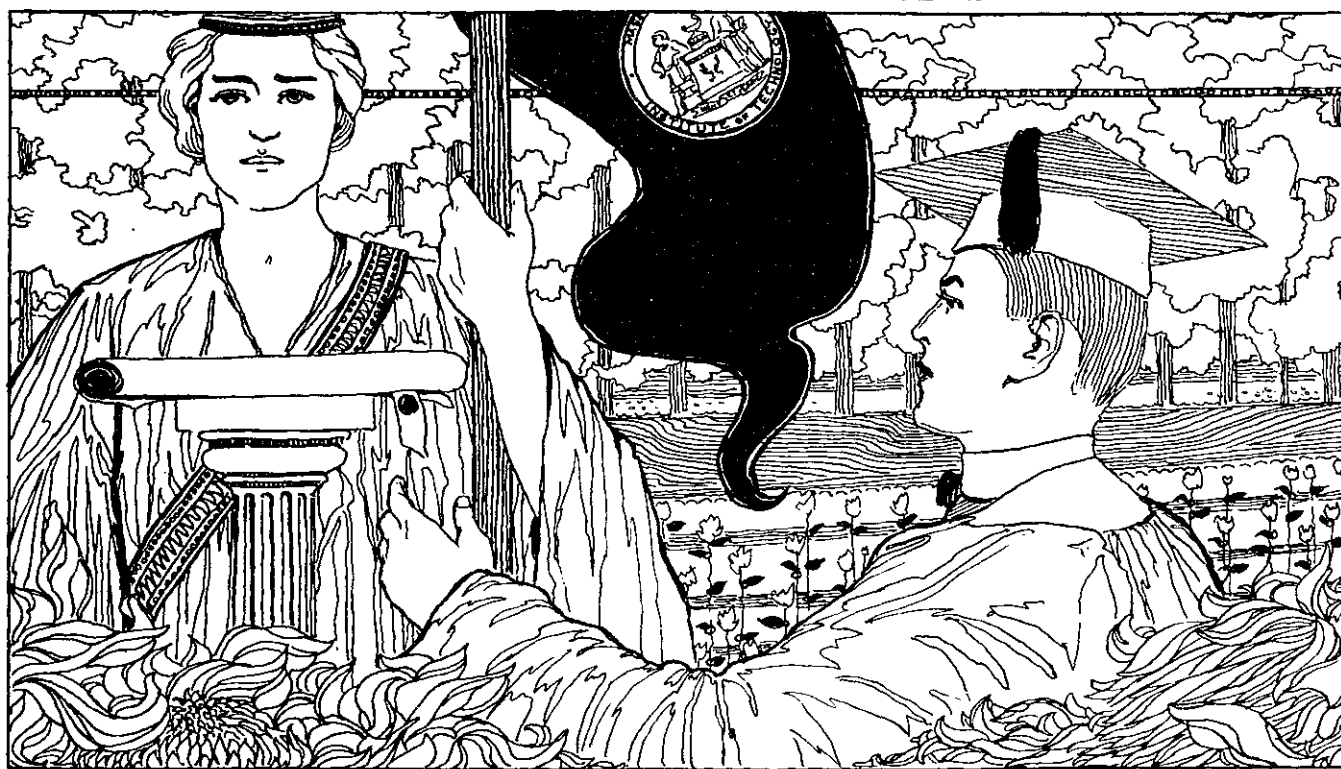




THE * * * * *
* * * * * TECH * * * * *
COMMENCEMENT
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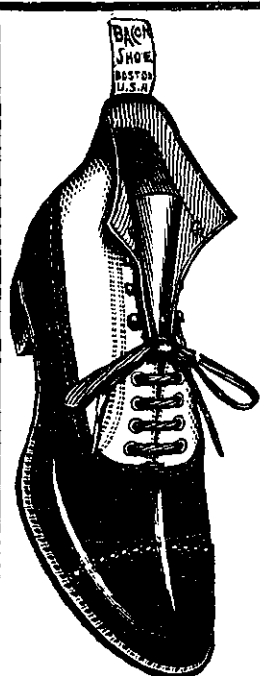
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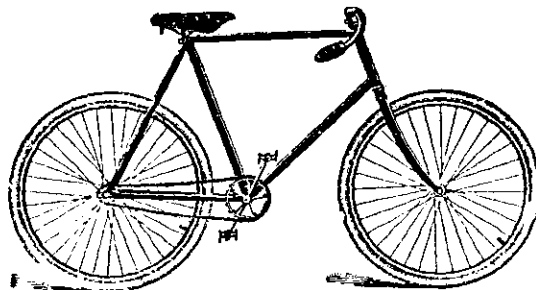
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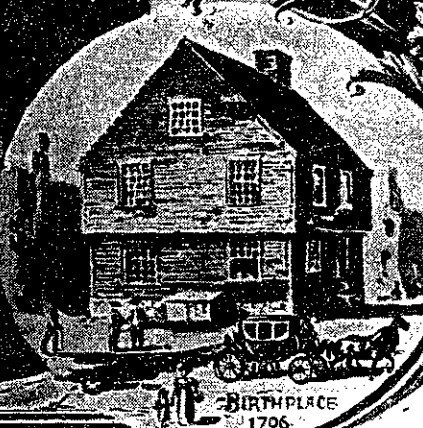
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'99 CLASS-DAY OFFICERS.

THE TECH

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BOSTON, JUNE 6, 1899.

NO. 30.

THE TECH

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

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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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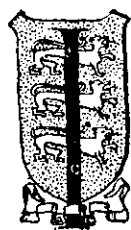


IN spite of the fact that Technology is not blessed with the college life of the average college, in spite of the fact that we have no campus to which our memory can go back in later years, there are other associations of a more serious nature connected with our Institute life which draw our men closer as the time for leaving approaches. The buildings in which we have labored faithfully, often against great discouragements,—our work finally crowned by success,—the satisfaction which comes from the knowledge of the ability to work out the problems in our chosen line of work,

the life-long friendships,—these are the ties which bind our graduates to Technology.

Therefore, together with the joy which comes of a work well done, and the anticipation of the larger and final work for which we have been fitting and so soon to be commenced, are mingled feelings of sadness at leaving so many familiar faces and scenes. The last great turning point in a young man's life is his graduation from college and entrance upon his career in the professional or business world. Whether he has chosen his life work wisely, whether he has improved to the utmost the opportunities within his reach, each man is his own best judge; his future success or failure depends in a measure upon the use he has made of his four years in college.

The Class of '99 is to be congratulated upon its eminently successful career at the Institute, and THE TECH wishes each and every member all possible success in future undertakings.



IN this, the last number of Volume XVIII. of THE TECH, the Editors desire to express their thanks to the many undergraduates and alumni of Technology who have given the paper their support during the past year. It has been a year in which THE TECH has done something financially very much better than merely making "both ends meet." That will doubtless be appreciated best by the editors both past and present. Of more interest, however, to our readers is the announcement that next year the subscription price of THE TECH will be \$2.00 instead of \$2.50. Again we thank the many friends of THE TECH for the aid which has made this change possible.

The Alumni Reception.

THE first of the many functions of Commencement Week was the reception to the Class of '99 by the Technology alumni, on Friday evening, at the Exchange Club. The occasion was one of the pleasantest events of the week. There was not the element of finality about it that goes with Class Day and graduation. As President Miller expressed it, something is added to a Tech. man's life when he becomes an alumnus, not taken away, and that with his graduation he does not say good-by to his Alma Mater.

After supper Mr. E. C. Miller, President of the Alumni Association, spoke of the object and work of the M. I. T. Alumni Association and the Walker Memorial Gymnasium. He closed by extending the welcome of the alumni to the graduating class.

Professor Niles, representing the Faculty, outlined in a pleasant vein the growth of the Institute, both in its material resources and in the mental development of the men it graduated. He also explained the relation between the Faculty and the undergraduate body.

Col. Thomas Livermore spoke of the interest and appreciation that the Corporation felt in Technology, and of the increased importance, due to changing economic conditions, of the service the Institute rendered to the Commonwealth. In outlining the great inventions of recent years, he called attention to the possibilities open to scientific men, laying special stress on the advances to come through a more perfect organization of industry. Colonel Livermore wished those graduating every success.

Mr. A. L. Hamilton, President of the Class of '99, recalled the various events in the history of his class, and in conclusion thanked the members of the Alumni Association for the cordial welcome.

The M. I. T. Glee Club gave several selections during the evening, which proved very acceptable.

The Senior Concert.

Huntington Hall was filled to overflowing, despite the hot weather, on last Saturday evening, the occasion of the concert tendered to the Senior Class by the musical clubs. Very generous applause called for several encores, of which "Under The Double Eagle" scored a hit, but H. G. Johnson, '99, was the favorite of the evening, with "Forsaken," and his magnificent bass voice. The covers of the programmes bore a design in class colors by H. S. Graves, '99, and their contents were as follows:—

PROGRAMME.

PART I.

1. Marfa's Wedding Day . . . C D. Underhill, '85.
Arranged for the Club.
Glee Club.
2. South Carolina Stft Tracy.
Banjo Club.
3. Night Off Rosey
Mandolin Club.
4. '99 Quartet Selected
Messrs. Adams, Pierce, Page, Johnson.
5. Dance at Twilight Lansing
Banjo Club.

PART II.

6. Fortune Teller Herbert
Mandolin Club.
7. Little Cotton Dolly Giebel
Glee Club.
8. Guardmount in Darktown Patrol . . . Lansing
Banjo Club.
9. Solo Selected
Mr. Harry George Johnson, '99.
10. Boston Tea Party Pryor
Mandolin Club.
11. Continuous Performance Gottschalk
Glee Club.

The Baccalaureate Sermon.

THE Baccalaureate Sermon was preached by the Rev. E. Winchester Donald, in Trinity Church, June 4, 1899.

Psalm cxix. 47: "I will delight myself in thy commandments, which I have loved."

Once more the Church welcomes beneath its roof a company of men and women who, having finished years of ardent study and severe academic discipline,

are met together voluntarily to ask God's blessing upon the future, which stretches out temptingly before them. For I have the right to take it for granted that you are here solely to testify to yourselves, at any rate, that you recognize the value of God's blessing upon the unknown future of your lives; and I have no right to interpret your presence here in more specific terms. You belong to widely differing ecclesiastical communions. Some of you disclaim allegiance to, or even sympathy with, any of the various ecclesiasticalisms which, together, make up the great total body of American Christianity. It must needs be, therefore, that our theme this afternoon shall be one in which each of us is capable of sympathetic interest; one which makes its appeal to us as members of the human family, irrespective of our particular denominational affiliations, or lack of them.

The Massachusetts Institute of Technology is reputed to stand in the front rank of our educational institutions in exacting from its students the maximum of obedience to its serious, lofty, exigent standards of intellectual discipline. Its reputation is deserved. It is not extravagant to assert that it is easier for a camel to go through the eye of a needle, than for an idler or a trifler to pass through the Massachusetts Institute of Technology. Very likely it is this notable circumstance which has largely determined me to speak to you of the Joy of Living under Law. . . .

The same is true of the unwritten statutes of society. More rigid, more merciless and irritating they seem at times to be than those of the State. Social custom is more imperious than a municipal ordinance. Its penalties for dishonor, untruthfulness, and treachery are very heavy, and with un pitying sternness are inflicted. Our whole social life is imperiously characterized and shaped by law. Restraint is everywhere. There is much which is petty and conventional about it all, but it is so inextricably bound up with what is everlastingly wholesome and necessary, that no wise man will break through social sanctions, or can safely defy them. Is it nothing to delight in that society demands loyalty and decency of us? Is it nothing to delight in that if we are to retain our social place we must be honorable, truthful, compassionate? Is it a trifle to be glad for that without these strenuous social sanctions there would be nothing to confide in, nothing to praise, nothing to appeal to when personal experiences, binding the walls of individuality, too, confines, craves sympathetic relations with the larger life of society? Yea, verily, we delight in every social

statute which guarantees the perpetuity of associated life even while restraining the freedom of the individual.

And this delight is distinctly increased when one reflects upon the purpose of social commandment. Society is wiser than any one of its members. It has penetrated into the very heart of man's social life, sought out the causes of disaster, disgrace, and danger, treasured the lesson drawn from a million separate careers, and then resolutely set itself to incorporate into rule the wisdom of the years. We may fault it for a thousand foolishnesses, none the less it is wise. But you and I are tempted to say: "Why should I permit myself to be shorn of my freedom to be myself by these exasperating rules? They were made for the bad, the cunning; not for me, honorable, pure, and strong." Ah, but society is wiser than we. It knows with unerring certainty that what we would not do we may do. Side by side with the safety of those who obey its laws, lies the ruin of others, once pure and strong, who defied and broke them. The insurgent heart of more than one Jude the Obscure has been battered, and broken, and stilled forever in wild rebellion against the accredited wisdom of society. And when one reflects even so little upon the multitude of men and women shielded by these social commandments from the perils of their own weakness or badness, and from the cunning, evil fascination of others; or when one thinks of that miserable company of ruined souls who, trusting to the infallibility of their own judgments and the purity of their own intentions, despising the larger wisdom of society, have made their own laws, framed their own maxims of social conduct, only to make shipwreck at the last,—surely we can delight in the commandments and statutes of society, and rejoice that our lives must be lived under their sway. What restrains us we rejoice in, what controls the freedom of our acts we are glad for, when we see what disobedience may bring, and what obedience secures. . . .

So is it that absolutely unrestrained life is anything but best. Therefore, when we hear God's commandment laying upon us the austere duties of justice, truth, compassion, reverence, and acknowledge that through the exercise of these, life's noblest powers are developed and refined, we ought to rejoice. But too often we complain that we are under law; complain that what that law enjoins is hard. It is burdensome and irksome everlastingly to struggle for what is just, and pure, and true. Why must incli-

nation forever meet the unyielding opposition of commandment? Why must desire be controlled by the heavy hand of law? Why must sacrifice be the inexorable condition of noblest life? And the answer is, because God wishes us to become like unto that pattern of the perfect man whom the world sees in Jesus Christ. It is when the ideal is clearest that delight in whatever helps us to reach the ideal is deepest. Then there is nothing in all the world with which a man would not gladly part rather than lose his consciousness of being a true man through and through. And when a man is wavering, when his weakened will is on the brink of consenting to the fatal plunge into the godless deep, how grateful is he for the uncompromising commandment which cries out, "Thou shalt not;" and the man stands up and says, "I cannot do this thing and go into the presence of God."

Again, it is worth our while to recognize that when we complain that serving God is hard, when we resist His laws, we are really fighting against the permanence of truth and goodness. For God is not a "languid dilettante, a magnificent Laodicean, a somnolent potentate, who is half-hearted in His care for distinctions between right and wrong." He has not chosen that truth should be a whim, or goodness a fancy dependent upon the shifty inclinations of men. He has grounded them in eternity, made them imperishable by the law which utters His own life and nature. The law certifies that truth is truth for ever more; that goodness is from everlasting to everlasting. The punishment which smites disobedience certifies that the truth which the commandment guards is eternal; that with God and the life He is disciplining there is no perhaps. It admonishes that no man can disobey and be safe according to his own notions of safety. It disarms the fascinations of sin, rouses us from the dull narcotic of pleasant, respectable, easy-going wickedness, and bids us recognize that to miss the reward of obedience is to bear the penalty of revolt. For God will not let us alone. If we refuse to use the divine fire of awe and reverence which burns in the heart of every man that cometh into the world, in accordance with the law of its, it will consume us. If we rebel against His wholesome discipline it will crush us. He lays great burdens on our shoulders that we may come to the proud consciousness of our strength. So always He treats us, seeking ever to make us, through this statutory discipline, strong, brave, pure, reverent, just, and compassionate; skilled in the art

of living helpfully and happily with our fellows, and meet for citizenship in the New Jerusalem, toward which the race from the beginning has, with varying fortunes and variant hopes, toilsomely pressed.

O blessed law of God, coming down from heaven out of the bosom of the Father, incarnate and perfectly fulfilled in the life of the Son, and through Him lifting us, the children, out of the flacid ease of uncontrolled desire, setting our feet upon the immovable rock of eternal truth,—surely in Thee is our delight; to Thee we owe our grateful love!

Members of the Senior Class, to-day you stand with the hard-won instruments of a serviceable career in your possession. A just pride, a happy contentment is yours as you recognize that you have earned your skill and knowledge. They are yours as the result of a long, patient, intelligent obedience to the inflexible rules of the Institute. Day by day the firm hand of law has been upon you. It conquered your moods, helped you to care for your health, prevented the waste of many a half hour, kept you at your tasks. How you rejoice in those imperious laws to-day; how grateful you are that good nature or weak pity never relaxed them. With rare intelligence you can say of the wise, firm rule of the Institute, "I delight myself in her commandments, for they have enabled me to call my intellectual soul my own."

Out into the world you go with the instruments of power in your hand. The Church of God bids you resolve to use them in obedience to His commandments, for you are going into the world with the power to bless or curse it. It stands in sore need of your ripe knowledge and expert skill. What will minister to its physical comfort and convenience, to its yearning for beauty, to its eager wish for the machineries through which unused force shall serve its growing needs, and to its hunger for the exact knowledge which shall prevent its ignorant blundering, is only yet discovered. You are the discoverers of the future. One of you will outdistance a Bessemer, an Edison, a Howe, a Whitney. Yes; but the world is in sorer need of more men and women who to cleverness, skill, and invention shall add unbroken obedience to that law of God which bids us exalt truth, justice, reverence, sacrifice, and compassion above invention, skill, and cleverness, that these last may be man's blessing and not his curse. That you may so exalt God's law and find it a delight, is the prayer which the Church of the Living God prays for you as you clasp hands, break ranks, and fare forth into the tumult of the world.

Class Day.

As usual Class Day opened fair and bright yesterday, June 5th, and two o'clock in the afternoon found Huntington Hall filled to overflowing with the friends of the Seniors. Twenty minutes later the Class-day officers and committee took their places on the platform. The officers were: First Marshal, Kenneth Mallon Blake; Second Marshal, Edward Hosmer Hammond; Third Marshal, William Stark Newell; President of Class, Arthur Little Hamilton; Historian, Lane Johnson; Statistician, William Malcolm Corse; Prophet, Walter Owen Adams; Orator, Harry Leonard Morse.

The members of the committee were: Francis Minot Blake, Guy Prentiss Burch,* William Burwell Flynn, Frank Fuller Fowle, Benjamin Prescott Hazeltine, Jr., Alexander Rieman Holliday, William Abbot Kinsman, Benjamin Eames Morse, Stanley Motch, Charles Barnard Page, Miles Standish Richmond, Haven Sawyer, Miles Standish Sherrill, Gerald Basil Street, Etheredge Walker.

President Hamilton said:—

Ladies and Gentlemen: It is with pleasure that I extend to you, on behalf of the Class of '99, a most hearty and sincere welcome. We all certainly appreciate the compliment you pay us in coming here this afternoon; and if, as Hazlitt says, "The art of pleasing consists in being pleased," we are already assured of the pleasure you will derive from the Class-day exercises of the Class of '99.

In a certain course in English Literature or English History, I do not remember which, we were told that the mention of an important date should always bring to mind the events with which it is associated. So when in the future you may chance to hear the fifth of June mentioned, we sincerely hope it may recall pleasant memories of the last and most important day in the undergraduate life of the Class of '99.

Although four years of undergraduate life may have excellently equipped us to undertake technical work, nevertheless we fully appreciate that we are very inexperienced in other lines, particularly in managing Class Days, and we therefore beg your indulgence for our shortcomings.

* Deceased.

To our fathers and mothers, without whose indulgent, and, as we hope wise, self-sacrifice, our life at the Institute could never have been realized, we extend first of our warmest welcome. It is a pleasure we have long anticipated to have you here with us; to show you the laboratory and lecture room in which we have spent so many profitable hours; to meet the classmates whose friendships, as you know, have formed such a large part of our lives at Technology.

To the Professors and Instructors under whom we have worked for four long years, we extend our heartiest welcome. Their efforts deserve our warmest thanks, for we appreciate that none but the best-disciplined minds could have transformed us from raw schoolboys to technical engineers.

To the young ladies, the most conspicuous and fascinating part of our audience, '99's welcome has undoubtedly been expressed individually in a manner more pleasing than lies within my power. Nevertheless each and every one of us is well aware that our failures would have been more numerous than our successes, had it not been for the incentive derived from your (may I say?) sisterly interest in our undertakings.

Fellow-classmates: During the past four years our Class has shown invincible determination in all her undertakings. Our efforts, both as a Class and as individuals, have been crowned with success. We have worked side by side, sharing our sorrows as well as our pleasures. We cannot recall our college life without sadness and regret, when we look in vain for the face of one classmate whose sterling character and unalloyed friendship endeared him to each of us. Such hearty and sincere friendships can but instill into us loyalty to each other and to Technology.

To-morrow we sever the ties which have bound us to Technology as undergraduates, and enter the different fields for which we have been preparing. Our technical training has fitted us to follow lines more specific than those of the average college graduate, and we must ever strive to crown all our undertakings in a manner worthy of our Alma Mater.

"Brevity is good, when we are or are not understood," is Butler's suggestion, and I intend to profit by it. However, there remains one thing unsaid. The office of First Marshal we consider the highest honor we can bestow as a class. This year we have chosen a man whose loyalty to his Class and to the Institute cannot be more fittingly acknowledged. I have the honor to introduce Mr. Kenneth Mallon Blake.

Mr. Blake:—

Fellow-classmates and Friends: To-day, undergraduates; to-morrow, alumni! Thus is the Class of '99 to be characterized at this time, the day on which we all are assembled to sing her praises for the last time.

We extend to you, friends of the Class, a most hearty welcome, and we hope that we may be able to show to you that our Class is all that which we have held her up to be. We are anxious to show to you the places which have become familiar to us; the places in which we have experienced many pleasures (and, too, I fear, many sorrows); the places in which we have formed many lasting friendships, which are dearer to us than aught that gold could buy. We appreciate the fact that we have so many friends who are interested in us, and we are proud that you have honored us with your presence on this, our Class Day.

Classmates: With us there is an indescribable feeling which we are experiencing at this moment. Is it not one of mixed gladness and grief? Gladness, in that we are able to say that we have at last reached the goal of our ambition. Grief, in that we are soon to look into each other's faces perhaps for the last time, and then bid Godspeed. But this is not the time for sorrow; we are here to rejoice, not to lament.

It is not mine to-day to pose as a Cicero or a Demosthenes, neither am I to play the rôle of a seer, nor could I interest you with bare, stubborn facts concerning different fellow-students, nor would I be able to justly recount the career of this, our Class.

Our thoughts at this time, naturally enough, stray backward to that eventful day four years ago. I refer to '99's birthday. Since then we have made a history which is, as we believe, above imitation, and it is to be presented by one who has been closely identified with all Class affairs, and one who is particularly adapted to answer the question, "What is her history?" I have the honor to present Mr. Lane Johnson.

Mr. Johnson:—

In the fall of 1895 the Class of '99 came to the Institute. For the first three or four days we wandered around in a little cloud of green-ness and tabular views—each man by himself. Everything alarmed us, the Bird particularly. Dr. Tyler we knew by reputation and through the entrance examination reports. None of us ventured into his den, and, on the advice of kindly disposed Seniors, decided to let him seek us if there was any seeking to be done. After a few days

we began to distinguish faces, and after we had gone to Captain Johnny's little setting-up exercises once or twice we began to feel a liking for Tech. You know at the Massachusetts Institute of Technology all Freshmen are supposed to be instructed in military science. Captain Johnny was the man who told us how. We didn't think much of him then, but now it is one of our proudest boasts that he taught us how to shoot straight, guide right, and not wriggle. Last summer Captain John Bigelow led his troop up San Juan hill, and when he stayed in front until four Spanish bullets hit him, won everlasting glory and the admiration of all Tech. men.

Then the Class Football team gave us something to talk about, and we found out that there was to be a class game and a cane rush pretty soon. Of course you have heard about the '99 Freshman Football team. It was famous in its day. Blake was on it, and so were George Copp and Stebbins. They are the only remains. How they did beat '98. The Sophs had an excuse, but nobody remembers it. The score was 16-0.

The cane rush was exciting. In any of the "Techniques" you can read what a cane rush is like, so I will not tell about this one. It is the culmination of Freshman initiation. The referee counted more '98 hands on the cane than '99, which showed our poor judgment in the choice of referee. After that cane rush we could tell a Soph at sight.

The Class Dinner was a revelation. Louie Shumaker gave a fine speech, and everybody had such a splendid time that the hotel manager grew envious, and turned off the lights.

Ninety-eight won a baseball game from us in the spring. Most of the men in our Class always deny that '99 ever had a ball team. Ninety-eight claimed the contrary, but that was probably due to a glory-hunting spirit.

The first thing we did Sophomore year was to teach the Freshmen proper humility by beating them at football. That victory was due to Blake. Of course there were other men on the team, but when the Freshmen got desperate in the last half Blake was the whole show until the whistle blew. The cane rush was close, very close. The score was 19-19.

The Freshmen were much encouraged by that, and next day several of them appeared with sticks. Our friend Mr. Kingman saw the first one. I think Kingman got that cane whole, but soon after the excitement became general, and the rest of the canes disappeared in pieces. The Class of 1900 offered to arbi-

trate, and of course lost, for '99's side of the argument was expounded by Mr. Hammond, who was president of the Class both Freshmen and Sophomore years.

It was almost the end of the term when the school was shocked and grieved by General Walker's death. Winter went by quietly on that account. In the spring 1900 won a baseball game from '99.

The Junior year began with an exciting political contest between Mr. Hamilton and Mr. Blake for presidency of the Class, as Mr. Hammond was about to retire from the business. Dark and subtle methods were used by both parties. The vote was close, but Blake finished stronger than his rival. Ben Morse played on the 'Varsity Football team that fall, and the 'Varsity made the best record for many, many years.

There was not much going on that term, but when the exam's came there was excitement enough for everybody. The semiannuals of the third year are the worst in the whole course. Some few buds withered in the fierce heat, but most of us got through all right.

The Class Dinner, as usual, was enjoyable. Sawyer told some good stories that were funny, and Stebbins made a real earnest speech, which took immensely with the audience.

In the spring, '99 won the championship in track athletics. I just mention this, not to boast, but for fear the impression that we can do anything but study will grow too strong.

"Technique" came out on time. Of course "Technique" comes out every spring, but it isn't always on time.

Tech. and Amherst had a Dual Meet, which Tech. won amid violent enthusiasm. Dr. Dewey forgot the maxims of Political Economy, and went out and lent his voice to the cheering; Dr. Tyler helped him. One of the runners said after the Meet that the cheering was the best he had ever heard.

The Senior year also began with another terrific contest for presidency between Blake and Hamilton. It was even closer than before, but this time Hamilton won. Some of the Blake voters had failed to come back to school.

The 'Varsity football took most of our attention until Thanksgiving. When the Boston College game was played and won the students came out and showed that a Technology cheer has lots of snap to it. The school was proud of the team, and '99 was especially proud of Captain Ben Morse.

More men came out to the Class Dinner than ever before. The star of the evening is the genial football captain. His stories kept the fellows in a roar.

In the Senior year it is customary to write a thesis. Writing a thesis means doing a lot of outside work and telling about it on paper in the most words possible. That, and having our pictures taken for the portfolio, took up most of our time this spring. There was a Junior Prom, as usual. Good authorities say that it was almost as fine as the '99 Prom.

Last week there were a few heart-breaking examinations, but we all struggled bravely, cheered on by the thought that perhaps they were the last, and came through somewhat shaken, but safely.

That is all the Class has done besides work. Of course some individuals have done things a hundred times more exciting, but you must find them out from some one else. I dare not tell.

Mr. Blake:—

Since that memorable day in September, 1895, there have occurred many interesting events and experiences, but we little thought at the time that these would ever call forth a document of foolscap size, and covered with a list of one hundred and ninety three questions, and following the unabridged dictionary definition of "statistics"; namely, "facts relating to nationality, religion, health, crime, morals, and ideals." But such was the case. The result of this I dare not foretell, but I leave it with one whom I take great pleasure in introducing,—Mr. William Malcolm Corse.

Mr. Corse:—

Classmates and Friends: I shall endeavor to bring before you a few facts that I have collected from certain statistical questions which I issued last April. You must not think, however, that by facts I mean figures, for the work of a Technology statistician does not consist wholly in a compilation of round numbers. This would give but a slight conception of the scope of the Institute. Not only have I considered the cold, intellectual side, but I have also carefully weighed and condensed whatever might be of interest in the physical, moral, and religious nature of the Class. To convey to you the quintessence of my researches is a matter of no little difficulty. I shall first read you a few of the replies that I have received in answer to my questions, and then endeavor to show you by a new and ingenious device how some of the qualities mentioned would look if embodied in a face.

Now for a few replies to my questions. The average weight of the Class is 147½ pounds. The average height is 5 feet 8½ inches, the tallest man being Waddell, 6 feet 5 inches. Nathan and Watkins tie for the shortest at 5 feet 4 inches; but Watkins carries

off the prize for baby, being 10 pounds the lighter. To illustrate the average size of the feet of the Class I have prepared the chart on my left. The boot in the middle is exactly the average size, namely, number 8. The one at the left is the size of Rickard's foot, $4\frac{3}{4}$. The one on the right is C. M. Lewis's. On account of the extreme size, $11\frac{1}{2}$, I was unable to get a boot large enough, but this is the nearest stock size. The chart on the right shows the color of our eyes. The predominating color is blue, the next brown, the next gray. The colors below represent the corresponding amounts of brain matter.

Two per cent of the Class intend to pursue their studies further, including W. O. Adams who, indeed, is determined to pursue them until he catches up. None seem to know why they took the course they did, except Pinkham. He took Course I. because it was the only one.

Our favorite exercise is climbing stairs. Our favorite game is undecided, except with Harry Johnson, who is confident that his is Tiddledy Winks. Stebbins is his own ideal of a man, while Skinner says, "Modesty prevents me from describing myself in such a place." Sixty-two per cent of the Class shave three times a week, twenty-six per cent every day, the remainder not at all. Two per cent began when they were little shavers; Swan began immediately after lathering. Eighty-seven per cent of the Class prefer cremation to burial; the others don't care, with one exception, Real, who doesn't want either. A few must have signed the petition sent to Mayor Quincy, for Hasbrouck gives this for his reason, "No food for worms, no sparrows."

The question, "Have you any serious deformity?" leads to many answers. W. O. Adams says his face is his deformity; Motch has one, but can't find it; Hammond has an unlimited capacity (for what, he doesn't say); Sutermeister says his stomach is too small; Heghinian has wheels, but claims they are natural; Hazeltine has an abnormally developed conscience; Jimmy Walton claims Harry Tyler pulled his leg; Newell ends the list with a rubber neck and elastic face.

The majority of the Class do not think their digestion has improved since they entered Tech., but Renshaw thinks his mental digestion has.

Our specialties: The majority have flunks; Palmer's is "collecting hair ribbons." I thought it best to announce this so all the young ladies would have fair warning. One has missions for a specialty; a number, loafing. H. L. Morse has the ability to

bite off more than he can chew and then chewing it. Sibley has mathematics and machine tools; while the last but not least is Packard's,—love. We have been very loath to tell our greatest weakness, but Nathan assures us that his is fondness for study.

Walton had the queer experience to pass a counterfeit quarter on the Bursar. J. E. Lewis was taken for a Freshman in his Senior year. Everybody agrees that the "Bird" has been improved on, but some miss "the flutter of her wings."

One hundred per cent of the Class want elevators for *students'* use. A large number would like couches on each floor. Hammond wants "cot beds." We are about evenly divided as to whether we shall send our sons to Technology. Swan would send them so they would the better appreciate their father. Nathan wants to know what they are doing. Isn't that right, Willie?

By vote of the Class the handsomest is H. H. Adams; the greatest dude Herbert. The class grind is Addicks; Mork is the brightest; James thinks he is. K. M. Blake is the most popular; H. L. Morse is the most conceited and also the nerviest. Goldthwaite is the most eccentric; Winslow the most footless. The bestnatured man in the Class is K. M. Blake; Kingman thinks he is. Swift says there is no grouchy man in '99. Benson and Goldthwaite tie for the windiest man, and Copp comes in for the biggest bluffer. The laziest man is Harry Johnson; the most prominent, Hammond. Hamilton is voted the greatest social light. H. L. Morse is the best athlete, but Copp thinks he is. The greatest jollier falls to the lot of Roland Williams Stebbins.

The second division of my subject is the embodiment of certain qualities obtained from the individual members of the Class into certain faces. Humanity may be divided into five distinct classes. Each of these classes may be typified by an individual. I have, therefore, separated the humanity of the Institute into the five classes mentioned, and have selected five properly fitted men to typify them. Now the process of reducing the characteristics of these men to a tangible basis has been a most peculiar as well as a most difficult one. I shall not attempt to explain it in detail, more especially as I am persuaded of your inability to grasp it. Still, it will be interesting to know that these men were subjected to the new process of sympo-sympathetic enlightenment. The man is first placed in a state of catalepsy; the air is then drawn from his body and condensed to the liquid form. The atoms of this liquid are separated one

from another and their quality and size determined. Then by the use of tables recently prepared by Prof. H. G. Johnson, headed "The Expansion and Contraction of Human Gas," the co-relation between the mind and the voice are accurately approximated.

The aforementioned victims were boxed and shipped to New York last month, there to be experimented upon. They were returned in normal condition this morning. The calculation of the results, however, took some time, and it is only within the hour that I have received notice of their completion. In order that you might not be disappointed, special telegraphic communication has been arranged, and the permission of the inventor obtained to use the telediagraph. This instrument, just invented, transmits pictures by telegraph. In order that the results may be more intelligible special rolls were made for the graphophone in explanation of each picture. By the ticking of the sounder I judge the pictures are ready for transmission.*

H. L. MORSE:—

"Hello, Harry,—hello, I say! Se. here, don't yer remember me? I used to go to High School wid yez. Yer needn't be so stuck up, since yer're a-going to that Technology College." "Oh, is that you Casey? I *did* almost pass you." "Well, dey tell me, Harry, you're a pretty popular fellar up dere. Now, jest for curiosity, I wish yer'd put me on de inside track of de game. See? Did yes work de same old bluff game dat yer worked in school? Ah, I see! Yes, I see yer popular, but how'd yer do it?" "Well, you see, Casey, I worked the profs, and then always had something to say wherever I went; took two full courses; made all the motions at the class meetings, etc. That made them think I was somebody. You see how it is. So long, Casey."

E. H. HAMMOND:—

Some will tell you I'm a dandy,
And some that I'm a dude;
And some that I am affable,
And some that I am rude.

But 'tis my own opinion,
Despite of all their talk,
Despite that I am handsome,
And with the girls will walk,

That only does it please me
To treat all men the same.
I always live for happiness,
And sometimes live for fame.

CLARENCE RENSHAW:—

A gentle youth withal, once touched by Fame,
But now a mourner of the common fate,
His features trace the path of Fortune's hand.

(*A device was here introduced by means of which the above men were caricatured. The lines were given through a graphophone.)

His ears do indicate a fawn-like taste for native wildness
and simplicity.

His brow is noble, and a seat for strength,
But tinged with an upward, longing look
That cannot know a full satiety.
The eye, the nose, a cunning glance do wear,
But inwardly they tickle not themselves;
A fit example of ambitious pride,
That strips a forest and rejects a palm.
But age doth oft mature a youthful lad,
If to her precepts he will give his toll,
"The little peiny of experience."

R. W. STEBBINS:—

"Hoot a wah, hoot,
Me name is Willie!
Ta ta."

A. L. HAMILTON:—

"Whoa, dere, Rastus, who's dat swell young gemmen
gwine down the street, dar?"

"O, Abraham Lincoln Jones. Haven't you heard of
him? He's der president."

"President of what, Rastus?"

"O, de president ob dat der class what's gwine to grat-
uetate ober dar at dat big buildin'. Did'n you know dat dey
say dat's de 'high falutinest' class what ever gratuetated
ober dere?"

"O, I doan care about de class. Who's dat young feller
wid de beaver hat?"

"Well, dey say his name is Art-u-r Little something;
I doan recomember de rest. I doan bleib it, dow."

The characteristics of these various men have been
carefully summed up. In the next picture an attempt
has been made to show the results.

SIXTH PICTURE:—

Whatever good fortune await you,
Be you scientist, bachelor, or bore,
Tho' monarchs or maidens may fête you,
And mortals may worship your lore,
'Tis my happy task to inform you
That spite of your wit and your pelf,
Tho' others may cease not to fear you,
You always may laugh at yourself.
For here is a likeness most like you,
Tho' doubtless you'll me call a crank;
But when you are dead and forgotten,
You'll be what you've laughed at,
—A Blank.

Mr. Blake:—

The history of this our Class does not close to-day.
To each one of us there comes a vision of the future,
but our next speaker has the gift of a vivid imagina-
tion, and he is able to correctly(?) answer us whether
or not our fortune is to be success. We await the
reply from Mr. Walter Owen Adams.

Mr. Adams:—

Friends: It is a dangerous thing to meddle with the future, and it is especially dangerous when one acts as a medium by which his friends learn of the ultimate result of their labors.

I am happy to say that I feel perfectly safe in making known the facts which follow. The cause for this security comes directly from a place of which, doubtless, some of you have heard; a place which Mr. Dooley describes as being "farther thin Boohlgahrya, an' not so far as Blewchoochoo, near Chiny, an' yet not so near; an' if a man was to bore a well through fr'm Goshen, Indianny, he might sthrike it, an' thin again he might not."

You doubtless recognize the Philippine Islands.

Last winter I received from a friend a large package accompanied by a letter. The following is an extract from the letter:—

"The package which I send with this contains a copy and a translation of a part of one of an almost infinite number of old parchment manuscripts which we discovered in an underground ruin on a small island near the island of Negros. More definite information as to the location I cannot give, and I must caution you to give no hint as to what I've told you until after June 1st, as we intend to spring the thing upon the world about that time. The ruin we suppose to have been, in ancient times, the library of a set of men somewhat similar to the Druids. All of these men were wonderful prophets, not one of the events which they foretold having failed to take place, so far as we can ascertain. In prying about among these manuscripts I found this relating to the fate of your class at college, and send it to you, as I said before." The rest of the letter is unimportant with regard to this matter.

The prophecy thus oddly found is written in the form of a play, although plot, motive, and in fact almost all of the requisites of a play are lacking.

The following is taken directly from the translation of the prophecy as I received it:—

(Place—Greater Chelsea. Time—The year 25 A. G. Note.—A. G. means after graduation.)

SCENE I.

A public square.

(Enter from opposite sides a policeman and a man bearing "a banner with this strange device, 'Sapoliodid it.'" Upon perceiving the man the policeman is about to move him on, but, instead, hastens forward, holding out his hand.)

THE POLICEMAN } together { HERBERT.
THE MAN } { COPP.

(They shake hands violently.)

POLICEMAN (wiping away a tear): Where on earth did you drop from?

HERBERT: That makes no difference. I'm here to take in the twenty-fifth anniversary of the graduation of the Class. Have you seen any of the fellows?

(Copp is about to reply when the blare of music is heard, and from the street at back enters a band of gaudily dressed musicians, led by a long-haired man waving a bâton.)

HERBERT: Lawrence Addicks and his famous band.

COPP: Yes; Sousa's successor.

(The band parades through the square, followed by an irregular crowd of men. The procession passes. At the end of the procession a chariot is seen surrounded by a group of men bearing wreaths of seaweed. In the chariot is a man of stalwart appearance, bearing in one hand a roll of parchment, and in the other a banner inscribed, "At Last." The chariot stops. The occupant waves his hand. Silence ensues.)

He chants:—

O happy me,
I'm full of glee
Upon this festal day.
I'll tell you the reason,
If you'll say you're not teasin',
I'm at last an alumnus
Of dear M. I. T.

The standard bearer suddenly gasps, "Corporal Bailey," and faints.

Quick curtain.

SCENE II.

(A large hall arranged for an informal entertainment. Time—Evening of the same day. Two men are discovered sitting at one of the numerous tables. The first speaks.)

A great scheme of yours, Patch, this entertainment for us. How long have you been in the theatrical business?

PATCH: Ever since two years after graduation. I started by going around with the Walker Club on their trips. I like it especially for one thing. It enables me to keep in touch with many of the fellows who have become stars. That is why I am able to get them to perform to-night. But what are you doing nowadays, Ham?

HAMILTON: Since leaving the Institute I have been delivering temperance lectures around Wisconsin. Lately I have had an offer to go to India as a missionary.

PATCH: What has become of the other fellows,—Renshaw, for instance? He isn't here to-night.

HAMILTON: He is now editor of one of our leading magazines, and is making a great hit just now in a series of articles after the style of Addison's *Spectator*. His *non de plume* is "The Loafer." By the way, have you talked with Malcom Corse to-night. He is red hot about the Oak Grove prosecution. He is State Inspector of Food, you know, and has caused the Oak Grove to shut down on the charge of selling cheap hardware under the name of dairy lunch. He flunked an exam. once on account of indigestion from the same lunch.

PATCH: I heard of Page and Newell the other day.

Rather sad news, too. They have designed a new submarine torpedo boat, and on its first trial, through some error in calculating the strains and stresses when the projectile was discharged, the boat was driven backwards through a stone pier and totally destroyed. They narrowly escaped with their lives.

Speaking of stresses and strains reminds me that Professor Lanza has been forced to resign his position in favor of James, who has now become even more of an expert on Interminable Girders and Theory of Elasticity.

(Music is heard. A gentleman steps upon a stage at one side of the hall. He sings a song, and at its close are heard loud cries of "D'ye t'ink oi am too shmall.")

HAMILTON: That's the first time I have heard Duck Johnson sing since I left Tech. Now that he has become so famous it is not so easy to hear him as it was in those days. Just as pleasant, though. By the way, have you seen Teddy Hammond or Harold Ayer to-day? They were to be here but haven't shown up. Teddy has a Cabinet meeting to attend. He is one of the ablest Secretaries the State department has ever had.

PATCH: I hear Ayer has done well too in his ventures in Milwaukee.

HAMILTON: Yes, as always.

(Enter a man dressed in the uniform of an officer of the Salvation Army. He takes a seat near by.)

PATCH: Have you see Clancy Lewis in his latest? There he is.

HAMILTON: Here come Ken Blake and Lane Johnson.

(Enter Blake and Johnson. They seat themselves at the table. Suddenly a loud noise is heard. All start up. The noise increases, and then subsides. All look inquiringly at one another.)

JOHNSON: The creator of that noise holds the most curious position of any graduate of the Institute. He stands on the roof of the City Hall, and every hour calls out the time of day. No clocks are used in any part of the county. Who do you think holds this important position?

ALL: Goldthwaite.

(The curtain rises again. A gentleman steps forward and recites a ballad.)

BLAKE: Hello, there's Harry Morse speaking. He is really one of our most versatile graduates. He is at present lecturing on the "Benefits of an Athletic Training." He expects soon, I believe, to go upon the dramatic stage.

(Blake and Johnson rise and pass on to another table.)

HAMILTON: What is Ken Blake doing now, Jap?

PATCH: He is president of a big Iron Trust in Pennsylvania. I hear Johnson is still writing histories.

HAMILTON: Yes. His latest is, I believe, a History of the Growth of Hirsute Appendages at the Institute. It is hinted that a professor in high position is giving him secret information.

(A movement is observed in the audience. The disquiet suddenly develops into a wild rush for the door.)

PATCH: What is it? Fire?

(Hamilton jumps upon a table to obtain a better view, when suddenly discordant sounds are heard upon the stage.)

HAMILTON (wildly): The Ninety-nine Quartette.
(Both join in the general flight.)

Curtain.

SCENE III.

Place—A Parlor Car. Time—The day after.

(The car is filled with men. All seem convulsed with laughter. Benny Morse is discovered telling stories. Snow and Stebbins are seen sitting apart conversing.)

SNOW: I haven't seen a night like this twenty-fifth anniversary night since the football game of '98. Fact is, I've done nothing but slave since graduation.

STEBBINS: What are you doing now, Freddy?

SNOW: After graduating I entered the Divinity School, and now I have a large church in Saugus, which keeps me very busy. How have you found things, Steb?

STEBBINS: About as swift as ever. I am just now perfecting an invention of mine. It is a machine for the conservation of the energy that has heretofore been wasted in making applause in a certain professor's room in Engineering A. Many of the fellows, when I was an undergraduate, suffered greatly from sleeplessness in those lectures, being forced to rouse themselves every few moments to stamp their appreciation on the floor. My machine is so constructed that it causes a loud noise in imitation of stamping every time a joke saturates the atmosphere. I have already enlarged my factory twice.

SNOW: Have you heard of Sherrill's latest discovery? Since leaving the Institute he has been so successful that he is now regarded as one of the leading authorities in Chemistry in the United States. He has just astonished the world by perfecting a process for obtaining ammonium chloride from glycerine.

STEBBINS: There's Miles Richmond over there. They say he made a mint of money running a sutler's business during the late war with Russia. The business principles he learned while running the Co-op. must have proved valuable.

SNOW: Stan Motch seemed to enjoy himself last night, and so did Ike Holliday. These vacations do them good. They have been very successful. Stan is the owner of large mines in the West, and Holliday has had full charge of surveying the boundaries of our new conquests in Africa.

STEBBINS: Benny Morse's stories seem as interesting as ever. Have you heard how he increased the demand for his Rising Stove Sun Polish? He shipped a lot to the African territory and created a demand among the natives for it. They use it as a face powder. He has doubled his plant.

(The train suddenly stops. All rush from the car to see what the trouble can be.)

Here the translation abruptly ends.

This is the end of the prophecy. I am sorry for the sake of those whose names were not mentioned that I cannot definitely tell them what their various successes will be. Doubtless by watching the newspapers they will learn of the discovery of this wonderful library, and may then learn of their fate.

There is one of whom I have not yet spoken,—one who is no longer a member of the Class, save in the memory of his mates. It would be easy to prophesy the future of such a man, for it would only be necessary to say: He was not only worthy of, but would have honored, any position, no matter how honorable. I speak of Guy Burch.

Mr. Blake:—

Now, since we have listened to our past, present, and future, we ask you to tarry while we hear of our ideals as sounded from the stentorian voice of the orator! These are to come from one who will on the morrow receive two degrees, and who for the past four years has been an indefatigable worker for the Institute. May I present Mr. Harry Leonard Morse.

Mr. Morse:—

Classmates and Comrades: We stand together to-day on the frontier of a new world,—the world of work. By this I do not mean to imply that the world whose doors close on us to-day is not a working world. The world knows better than that, and we know better. Tech. has its reputation: Tech. is the workshop of the college world; work is her watchword; to train for work she exists; none but workers may earn her sign manual, under which to go forth and demand their right to do their share in the work of the world. We have won that sign manual, and we have won it at the price of long and hard work. And yet I say again that we are going forth to-morrow into a world of work, the like of which we have not known. It is good for us to pause for a moment on the frontier of that world, and cast a glance before and behind.

In what does the work on which we enter differ from the work we have completed,—so far differ as to make it new work? In this: we have all our lives worked under direction,—now we are called upon to work without direction; we have all our lives done work whose direct, immediate results concerned ourselves alone; henceforth we are to do work whose results concern the world. We are like children who have been learning to walk. It is true we have seemed to take many steps by ourselves alone; but all the time our Alma Mater has been standing closely by; her hand has been ever extended to stay us when we walked uncertainly, to direct our steps, to guard against our doing mischiefs to ourselves or others. To-day that guiding hand is withdrawn. Henceforth we walk alone: we abide by our own mistakes. The difference is great; the difference is in a sense sol-

emnizing. We can bring it home to ourselves by realizing the difference between a false line drawn in the design on an examination paper, and the same false line drawn on the design which is to serve as the unquestioned working directions of the artisans constructing some mighty piece of machinery, some lofty building. The line on the examination paper means a lowered mark for the student; the line on the engineer's authoritative design means, perhaps, the loss of millions of money, of hundreds of lives. We cross the line to-day between irresponsible and responsible work. Our future work is responsible in many senses, and all of them serious ones. We are responsible to the community which places some of its most vital interests in our hands. We are responsible to our Alma Mater, whose fame must always stand or fall by the achievements and the faithfulness of her sons. We came to our Alma Mater with a serious demand, and she has responded very nobly. It is for us, in all our future working lives, to show our appreciation of that response. A college education does not mean quite the same to a Tech. man that it does to the average college man. A college education may be a mere adjunct to a social future,—a sort of boutonniere added to the dress of a gentleman. Such a college education is obtainable at most colleges at a price of work commensurate on the value placed upon it. Such an education is often frankly sought. But such an education is not to be had at Tech. Tech. does not have in her gift flowers; she has seeds. A man must sow and reap his harvest, the Mother always by his side to direct, but never to do the work for him. Men go to Tech. not to have their Alma Mater seal them gentlemen, but to make them workers. What Tech. does for a man, and what she sends him out to do, I find very well phrased in that song which faced the name of Tech. on the first big public venture of Tech. into the field of play.

Our flowers of learning are hardy and few;
But little of that we reck.

To sow seed of science the man-world through,—
That is the work of Tech.

The trumpet song that is Action's cue;
The song of the engine deck;
The song of the men that learn to Do,—
That is the song of Tech.

The living force in the heart of the ship,—
Not the grace of the quarter-deck;
Pulse of the heart—not word of the lip,—
These are the men of Tech.

That says it, I think. We are the men of the engine deck; our place is with the living force in the heart of the ship. It is a position to be deeply proud of; it is a position worthy the best a man can make of himself. It is a position whose possibilities a man may spend his life in trying to realize. It is a familiar saying that every man carries about with him the hall-mark of his work in life. The teacher's work sets its mark of exactness; the soldier's, its mark of fine discipline and instant courage; the poet's, the mark of the dreamer of high dreams; the sailor, the keenness, the unconventionality of him who does business with great waters. What is the hall-mark of the engineer,—using engineer not in its strict, technical sense, but in its broader sense of the man who conducts, who carries through the world's work on its mechanical side? I do not think there is any better answer to this than that given by the "auld Scots engineer," McAndrews, as he keeps the middle watch, alone wi' God an' his engines.

They're all awa! True beat, full power, the clangin' chorus goes

Clear to the tunnel where they sit, my purrin' dynamos.

Interdependence absolute, foreseen, ordained, decreed,

To work, ye'll note, at any tilt, at any rate of speed.

Frae skylight-lift to furnace-bars, backed, bolted, braced, and stayed,

An' singin', like the mornin' stars, for joy that they are made.

While out of touch of vanity, the sweatin' thrust-block says,

"Not unto us the praise, or man; not unto us the praise!"

Now a' together hear them lift their lesson, theirs and mine:

"LAW, ORDER, DUTY, and RESTRAINT, OBEDIENCE, DISCIPLINE!"

There you have the hall-mark of the engineer; there you have the hall-mark that Tech. leaves on the true Tech. man,—the man who has looked deep into the eyes of his Alma Mater, and read her soul there,—LAW, ORDER, DUTY, and RESTRAINT, OBEDIENCE, DISCIPLINE!"

To live ever in the presence of recognized and revered Law; to consciously obey that Law in the ordering of the last detail of his work,—that is the hall-mark of the engineer. That is the mark that we shall all carry forth into the world of responsible work, in so far as we are true sons of our Alma Mater.

It is a stock phrase of college orations that the time is come for us to put away childish things. I do not say that here to-day, because I have realized more

and more with every day that I have been a Tech. man; that a man begins to put away childish things, not when he graduates from Tech., but when he enters Tech. It is commented on, sometimes, how few so-called college pranks—pieces of mere childish mischief—can be laid at the door of Tech. men, great college as Tech. is, and in the midst of a great city. If this is true, it does not argue that Tech. men are prigs, or that they don't know how to enjoy themselves, or that they have less of healthy animal spirits than other men of their years; above all, it does not argue that they are in any danger of translation for virtue above their fellows; we have censors in our midst that convince us of that. It does mean that from their entrance into Tech. they are face to face with fixed, and ordered, and immutable Law; that they work in its atmosphere, and something of its lesson passes without their meaning or willing it so, from their work into their lives. That is why things take on mature proportions earlier with Tech. men than with most college men. That is why Tech. men have the—in many instances most unjust!—reputation of being more serious than the men of their sister colleges.

If our Alma Mater has taught us respect for, and obedience to law, she has given us the most needed lesson of a man's life. If our work and our lives help and not hinder the working of the law that governs the universe, and somewhat enlighten the eyes of our fellows to the reading of that law, we shall do our Alma Mater the best service open to us.

Our Alma Mater is worth our best service. How worthy she is we shall know more and more thoroughly as the years go by. More and more, looking back at her through the vista of the year, we shall see her as she is; not as a woman in fair silks and jewels, with hands soft with ease, but as a Titaness of the mightier early time; with arms swelling with the muscles of a great strength, and hands skillful to shape and strong to smite. And seeing her so we shall learn to say of her:—

The colleges full of pride,
Challenging each to each,
One from her stern hillside,
One from her salt-sea beach,
Counting their wealth full tale,
Wealth as of corn or wine,—
College to college they hail,
"Hast aught to match with mine?"

And the men that bred from them,
They travel up and down;

Yet cling to the college hem,
 As a child to the mother's gown,
 When they talk with the stranger bands,
 Dazed, and newly alone,
 When they walk in the stranger lands,
 By roaring streets unknown,
 Blessing her where she stands,
 For strength above their own.
 On high to hold her fame,
 For them all fame beyond,
 Making her mere-breathed name
 The bond upon their bond.
 So thank I God my birth
 Fell not in homes aside;
 My college lent me worth,
 And gave me right to pride.

Ever in toil or fray,
 Under an alien sky,
 Comfort it is to say,
 "Of no mean college am I!"
 And she shall touch and remit,
 After the use of kings
 (Orderly, ancient, fit),
 All that her true son brings,—
 All that he wins in all lands;
 And this I do for a sign
 Her power is over mine;
 My power I hold at her hands!

Mr. Blake :—

And now, friends, that you have heard our praises sung, we can only hope that we have awakened in you an interest not only in our Class, but also in the Institute itself. For it is the Institute which will follow us as we start out as Freshmen in the great world.

If we have thus won your sympathies, we will bring this hour to a close with a feeling of satisfaction.

Of you, my fellow-classmates, as we are about to bring to an end this our Class Day, let me ask that you may ever try to keep these Class friendships as close as possible, because of the good which will result both to ourselves and to our age; and when in years to come as we look back upon our path, may it be said that we have been an honor to ourselves, our parents, and our dear old Alma Mater.

At the conclusion of the ceremonies in the Hall the company adjourned to the fifth floor of the Pierce Building, to partake of the spread which had been prepared. The ices proved most acceptable after the intense heat of the day. Dancing followed, bringing to a close a most pleasant day for '99.

The Graduation of the Class of '99.

THE graduation of the Senior Class was held this afternoon in Huntington Hall. The exercises were similar in their simplicity and informality to other years. The hall was filled with the guests of the Institute, and the parents and friends of those who received degrees.

Theses representative of the work in the various courses were read as follows :—

Course I.—John Berton Ferguson, Plan for Separation of Grades at Arlington, Mass. (With C. W. Brown.)

Course II.—Benjamin Stearns Hinckley, Tests on a 12-Wheel Compound Freight Locomotive on the Boston and Albany R. R. (With H. A. B. Campbell.)

Course III.—Sylvester Quayle Cannon, Treatment of a Low-grade Gold-bearing Silver Ore.

Course IV.—Almeron W. McCrea, B.S., A Design for the American Ambassador at Paris.

Course V.—Harry Solomon Mork, Analysis and Conditioning of White and Colored Silks.

Course VI.—Clarence Renshaw, Design and Construction of an Apparatus for the Study of the Alternating Current Arc. (With N. E. Seavey.)

Course VII.—Bertha L. Ballantyne, On the Influence of Changes of External Temperatures on the Capillary Blood Pressure in the Skin.

Course VIII.—William Otis Sawtelle, A Study of the Electrical Resistance of Metallic Films.

Course IX.—Amasa Amidon Holden, A Study of the Methods Used in Passing Congressional Appropriation Bills, illustrated by Legislation of the First Session of the Fifty-fourth Congress, from Dec. 2, 1895, to Jan. 11, 1896.

Course X.—Charles Burton Gillson, A Study of Lead-Tellurium Alloys.

Course XI.—Philip Burgess, A Study of the Sewerage Systems of South Framingham and Natick. (With B. Herman.)

Course XIII.—William Stark Newell, Progressive Speed Trials of Steam Yacht Kaleda.

President Crafts' address was as follows:—

A friendly and appreciative audience of your classmates, your parents, relatives, and friends have had the satisfaction of listening to some simple descriptions of the researches which form the crowning tasks of your school career, and which are in some degree the tests of your capacity for original work and of your fitness to go on without guides in the active, competitive life before you. The papers read give an excellent idea of what you are trying to do, and how you are trying to do it; but something may be added to the story, and I will ask a few minutes of the patience of the audience to say, as your spokesman, some things which you cannot well say about yourselves. I wish particularly to speak of the spirit which has animated the good work which you have just been describing in the brief formulæ of scientific terms.

The statistical people tell us that the measure of civilization in the world to-day is the use of iron; Liebig said soap was the standard, but probably iron is now a better one; and, as usual, such statistics are brought forward for self glorification, and we are told that the United States and England lead the world with three hundred pounds use of iron per capita per annum, while Asia sinks to a few pounds, and perhaps Africa to some ounces per head.

If this measure of civilization is correct, it is worth while to see how we ourselves are measured by it. It is needless to say that three hundred pounds of iron are not weighed out each year to each individual; it would be an embarrassing present to some, and far too little for others; and here is where we come into the story and play our part as the leaders of civilization and the ministers of this iron mission to the world. You miners and smelters are to dig the ground for coal or iron ore and limestone, and raise iron pigs almost as easily as the great American corn crop is converted into living pigs. You will have a constant and ready market for your pigs. You will not find yourselves obliged to call in the aid of the skilled diplomats who are now trying to persuade our German brethren to eat American pork products. Or perhaps you will produce your quantum of iron indirectly by

mining gold, silver, or copper to pay for iron. You will distribute your product to your fellow-workers, the civil, mechanical, and electrical engineers, who will roll it into rails, or fashion it into engines, or draw it out into slender wires, or to the Naval Architects who will plan our ships. These all serve one common purpose to bring man nearer unto man. You are advancing art as well as civilization, for the architect from the days of Michael Angelo to the present time is an engineer as well as an artist, and the three hundred pounds of iron measured out for his use enables him to solve many problems which appeared impossible to Angelo or Wren; and skill in iron working has from all time been a title to distinction,—for, although there are more carpenters than smiths in the world, Smith is the distinctive name most often handed down from father to son.

Such, then, is the brief story of your work if we take a single material and a single use of it for the sake of simplicity of treatment, but it is easy to see what are the contributions to this work of civilization of the chemist and the physicist, who provide the original data upon which the metallurgist and the engineer are working, and how, also, at the base of and pervading all calculated knowledge is the abstruse work of the mathematician, whose forms of expression are as essential to scientific thought as a common language is to human intercourse.

Then, again, the transformation of a shovel full of iron ore into a bit of steel rail, a bundle of needles, or watch springs, can only be done economically by large associations of men in settled and well-organized communities, and the work of the sanitary engineer, the political economist, and the historian are obviously essential to a knowledge of the laws of health and order which must regulate such communities.

You who are equipped with this knowledge, and are handling these materials, are going to do this work of civilization for the thousands of men, women, and children who are incapable of doing it for themselves, and your names will be graven upon the corner stones of new edifices, which will change the aspect of the world before you are old men; and we shall look with pride upon your success,—we who have step by step built up a school, adding, as we saw the need of it, each thing which we thought necessary to enable you to be the architects of new structures, and incidentally to be the architects of your own fortunes.

I will not deny that iron construction may be abused, as well as used, but the same is true of most good things, and I will not turn aside to argue with those

followers of Ruskin who assure us that railroads lead civilization backwards.

It is difficult to offer convincing proofs to the type of mind which worships the beautiful, and thinks its production a lost art. I think, however, that Leonardo da Vinci, or Sir Christopher Wren, the friend of Watt, would have said that beauty can be engineered as well as imagined, and I see in many modern works a beauty and a progress in the thoughtful adaptation of means to ends. Certainly such adaptation is a progress, and one most needed in our American civilization, where the wastefulness of our processes strikes all experienced observers. You know that it is your business as engineers to count the cost before you build your tower, to use just the right quantity and quality of material, and your education fits you for a most important mission to your fellow-countrymen. Go and teach the doctrine you have learned; persuade the farmer to save the useless sacrifice of beasts of burden upon the worst-graded roads in the world, to cut his forests so that some trees will be left for coming generations. You chemists may even have a word to say to our Congressmen, and tell them to prepare for war as soon as the fighting mood comes on by getting their powder ready. You can tell them that Chili saltpeter and cotton exist upon this Western Continent, and the skill to transform those materials into smokeless powder also exists here.

I suppose that the next war will not find us unsupplied with this particular article, and the next time we besiege a town it will be with heavier artillery, and perhaps a lighter general; but I fear that for a long time to come those who vote our budgets will still be improvident of the future, and indisposed to listen to the opinions of experts. Yet all prudent men are moving in the opposite direction. The railroad which formerly could not afford to employ engineering skill, now cannot afford not to. Every enterprise, large and small, is going to recognize the value of your trained knowledge, and to use your services more and more; but those conducting the greatest business of all, that of governing seventy millions of people, are slow in recognizing that professional methods and close calculations are everywhere pushing aside guess-work business.

I think that you have a peculiar claim to be heard. There are experts of all kinds who are pronouncing opinions on all subjects, from religion to gun cotton, and many of them discredit expert testimony; but you, scientific men, have learned methods and are working in fields where your work will speak for you;

and nothing is easier to test and recognize than the value of the products which you turn out.

Your success will not only turn to your own profit, but also, as citizens of a great country, you may hope by your individual efforts, to gain over men to the belief that it pays to educate employees for every task which they have to perform; and if we are to enter upon a great colonial policy, the moment is pressing for the recognition of the truth by every citizen.

Yet, in bidding you farewell, I care very much to say to you that the things which I have described make up the smallest part between an educated and an uneducated man. Education is very much a matter of influence, or contagion, from man to man; and in this scientific school the relation between teacher and scholar grows closer, and oftentimes more friendly, toward the end; because in the small laboratory or class room sections you find yourselves trying to pass beyond the boundaries marked out by routine and text-books, and, in companionship of your teachers, trying to discover something new. This is the chief end of education; not so much to make you learned as to make you original, and to stand you on your own feet. The aim is the same in every branch of knowledge; but the discipline of science has thus far been most successful in attaining this result, by means of her wonderfully organized system for selecting the problems which we are prepared to solve, and for testing the absolute accuracy of the solution.

The genius of Aristotle, Bacon, Galileo, Newton, has built up for you a heritage which not only is unimpaired, but has had compound interest added through the ages. It has been our business to seek to put you in possession of this body of scientific methods for using the known to find out the unknown, and so far as may be to direct you in their application.

One thing more only will I say, and that is that you must have felt that the key to success in scientific work is a love for the truth.

As the love of money is the root of all evil, so the love of truth for its own sake lies at the root of all good, and the successful, well-organized search for what is absolutely true, is the most joy-giving and satisfactory occupation that a man can engage in.

You go out from here to all the ends of the earth having had less class companionship than in many a college, but you go to a closer companionship than exists among most college alumni, because you bring more directly every day into use what you have learned here, and well learnt since: unlike many college students you knew exactly what use it was going

to be while you were learning. But, above all, if you pursue science with its highest aims ever before you, that common purpose in life will form, and does form, the closest bond that can bind alumni together.

You know that the occasion is not held to be a ceremonious one, and it is not well to speak as if we were not to see each other again. I hope the high aspirations with which you are beginning a new career will be fulfilled, and that you will come back to your Alma Mater to let us hear of your success; and those of you who cannot come in person, will ever keep in communication with your old school.

Last Friday you received a hearty welcome from the alumni, and to-day we feel that we are not bidding you good-by, but rather that the diplomas just handed to you are certificates of membership in the larger society of sons of the Technology, and that you are joining together to work for your school as your school has worked for you.

You will always have our active interest and good wishes, and we also feel certain that you will not forget your Alma Mater.

After the exercises President and Mrs. James Mason Crafts will receive in the general library in Rogers Building the members of the Class of '99, their friends, and the professors and their wives. These receptions were held in the President's office in General Walker's time, but the completion of the new library now affords a more suitable room for the occasion; and it is expected that the President's reception will be made a more important function of the exercises.

Degrees.

Candidates for degrees in the several courses of study were as follows:—

Candidates for the degree of Master of Science: Daniel Wilbert Edgerly, S.B., Gorham Phillips Stevens, S.B., Charles-Edward Amory Winslow, S.B. Candidates for the degree of Bachelor of Science: Lewis Benjamin Abbott (IV.), Herbert Henry Adams, B.A. (I.), John Howard Adams (VI.), Walter Owen Adams (X.); Lawrence Addicks (II. and VI.), James Walter Allen (VI.), Harold Osgood Ayer (V.), Thomas Wendell Bailey (IV.), Bertha Lennie Ballan-

tyne (VII.), Walter Raymond Bean (XIII.), Raymond Franklin Bennett (I.), Carroll Augustus Bennink (IV.), Newton Davis Benson (IV.), George Edwin Bergstrom (IV.), Arthur Eliot Blackmer (I.), Francis Minot Blake (II.), Kenneth Mallon Blake (II.), Walter Weidenfeld Bonns (IV.), Arthur Harrison Brown (II.), Carroll Wilder Brown (I.), Philip Burgess (XI.), Frederick William Caldwell (II.), Harry Andrew Bach Campbell (II.), Sylvester Quale Cannon (III.), Willard Telle Cannon (II.), Herbert Monroe Case (VI.), Edna Matilda Chandler (V.), James Finlay Chapman, S.B. (VI.), David Carroll Churchill (II.), Frederick Otis Clapp, A.M. (I.), James Kenneth Clark (II.), Clarence Brooks Cluff (V.), John Elliott Congdon (II.), Herbert King Conklin (IV.), George Irving Copp (II.), William Malcolm Corse (V.), William Lehmer Curry (VI.), Harvey Morse Cushing (VI.), Harry Sumner Damon (II.), Henrietta Cuttino Dozier (IV.), Charles Davis Drew, A.B. (I.), Henry Charles Eaton (II.), James Benjamin Ellery (V.), George Dana Emerson (VI.), John Berton Ferguson (I.), Leonard Hamilton Field, Jr., A.B. (IV.), Frederick Alonzo Fifield (II.), John Albert Flemings (VI.), William Burwell Flynn (VI.), Arthur Burling Foote (I.), Frank Fuller Fowle (VI.), Gardner Manning Gale (IV.), Charles Burton Gillson (X.), George Curtis Glover (IV.), Harry Wales Goldthwaite (II.), Herbert Chester Greer (III.), Asa Waters Grosvenor, B.S. (II.), Frederick Warren Grover (VIII.), Edward Hosmer Hammond (V.), Ross Hasbrouck (I.), Laurence Ashley Hawkins, B.A. (VI.), Benjamin Prescott Hazeltine (VI.), Reuben Stewart Henderson, B.S. (I.), Bernard Herman (I.), Frank Edward Hermanns (I.), Joseph Lewis Hern (VI.), Henry Harwood Hewitt, A.B. (IV.), Benjamin Stearns Hinckley (II.), Everett Hale Hinckley (X.), Amasa Amidon Holden (IX.), Alexander Rieman

Holliday (I.), Frank James Huse (II.), Jerome Paul Jackson, A.B. (IV.), Henry Philip James (II. and VI.), Hans Peter Jensen (I.), Edward Johnson, Jr.; (I.), Harry George Johnson (V.), Lane Johnson (II.), Harry Montifex Keys (VI.), Fred Louis Holt Kimball (III.), William Abbot Kinsman (II.), Thomas Frank Lennan (V.), James Gerhard Leiper, Jr. (II.), Clancey Montana Lewis (III.), Joseph Elliot Lewis (II.), Allen Loomis (XIII.), Ralph White Loud (I.), Lee Rosenberg Loveman (VI.), Almeron Wallace McCrea, B.S. (IV.), William Scott Matheson (II.), Carl Spencer Milliken (VII.), Clarence Alfred Moore (X), Carl Leon Morgan (VI.), Harry Solomon Mork (V.), Benjamin Eames Morse (II.), Harry Leonard Morse (II. and VI.), Stanley Motch (III.), Lester Allan Newell (III.), William Stark Newell (XIII.), Timothy Cyril O'Hearn (X.), William Henry Joseph O'Leary A.M. (VI.), Edwin Augustus Packard (II.), Charles Barnard Page (XIII.), Worthington Palmer (IV.), Will Rogers Parker (VI.), William Edward Parker (I.), George Alger Pennock (II.), George Hawthorne Perkins (II.), William Clifton Phalen (V.), Earle Bernard Phelps (V.), Edward Everett Pierce (XIII.), Ralph Howard Pinkham (I.), Willard Atherton Price (I.), George Heywood Priest (X.), Juan Real y Gaillard, A.B. (I.), Ernest Albrecht Regestein (VI.), Clarence Renshaw (VI.), Albert Aden Reynolds (V.), Gerald Martin Richmond (VI.), Herbert Hugh Riddle (IV.), Lewis Wetmore Riddle (XIII.), George Hayes Riker (X.), Samuel Brown Robertson (I.), Edwin Francis Samuels (II.), William Otis Sawtelle (VIII.), Haven Sawyer (II.), Norman Emory Seavey (VI.), Miles Standish Sherrill (V.), Edward Warren Sibley (II.), Frederick Robert Sites (I.), Hervey Judson Skinner (V.), Charles Alfred Smith (I.), Lawrence Clement Soule (X.), Herbert Harris Starr (I.), Frederic Baldwin Stearns (IV.), Philip Stockton, A.B.

(I.), Jacob Stone, Jr. (IV.), Gerald Basil Street (II.), Edwin Sutermeister (V.), Walter Hannen Sutliff (IV.), Clifford Melville Swan (V.), Charles Williston Swift (II.), Frank Robinson Swift (X.), Frederic Tappan (VI.), Denzil Hollis Taylor (I.), Charles Augustine Torrey, Jr. (V.), Edgar Pierce Trask (XIII.), John Lawrence Tufts (V.), Robert Macalister Vining (II.), Gardner Tufts Voorhees (II.), Frederick Creelman Waddell (I.), Etheredge Walker (III.), Robert Bruce Wallace (XIII.), John Abbet Walls (VI.), Edward Philip Walters (V.), William John Walther (I.), James Henry Walton, Jr. (V.), Frederick Arthur Watkins (II.), Charles Albert Watrous (IV.), Walter Wiley Wells (VI.), Lewis Rose Whitaker (I.), Harry Keith White (IV.), William White (V.), Charles Frederic Wing, Jr. (VI.), Percy Warren Witherell (VI.), William Lyman Wood, Jr. (VI.), John Woodward Woollett (I.).

"Technique," 1901.

The following constitute the 1901 "Technique" Board: John Timothy Scully, Jr., Editor in Chief; Philip Coombs Pearson, Edward Hatton Davis, Associate Editors; Warren Ira Bickford, Society Editor; Ray Murray, Athletic Editor; Newman Loring Danforth, Charles Ward Adams, Statisticians; Percy Harry Parrock, Business Manager; Leonard S. Florsheim, Assistant Business Manager. Artistic Staff, Edward Townsend Howes, Editor in Chief, William Thurman Aldrich, Samuel Winthrop St. Clair.

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N. E. I. A. A. Championships.

THE showing made by Tech. at Worcester, on May 20th, was about as disappointing as anything well could be. Never before were prospects brighter, and never before was the showing poorer. Murray and Baxter were the only men who fulfilled the promise given by their work this spring. Both men were easy firsts in the two-mile bicycle race and the high jump respectively. Horr managed to scrape a third place in the high hurdles, and this settled Technology's point winning. While it is not a sportsmanlike excuse, "hard luck" seems to be about the only reason for the defeat. Within a week before the meet, Wentworth and Field were badly crippled, and all chances of their scoring were lost. Garrett contracted a heavy cold, and could not finish the half at a clip much slower than he has been doing right along in training. Steever, the only man on the bicycle squad besides Captain Murray who had the courage to start on the running track, rode a race that shows him to be as game a man as ever represented Tech.

In the morning he won his trial heat handily, but he had paced the heat from the start to the finish, and was thoroughly exhausted by his effort. After crossing the tape he lost control of his machine, and ran off the track, and into a baseball score board with a terrific crash. He was picked up unconscious, and carried to the training quarters, where he soon came to. Besides being badly jarred from the collision he sustained a painful injury to his leg. The wheel was badly bent, but was straightened up in time for the finals in the afternoon. As in the morning, he paced almost the whole distance, and although full of pluck, he did not have the strength left when it came to the sprint for the tape.

Dutton's reversal of form in the quarter also came as a surprise. He was a prime favorite before the race, but in his heat he struggled in fifth in time, a full second slower than he

has been doing steadily on the Charlesbank track.

The forecast given the last number of THE TECH. was made on the performances of the men in their training. If these performances had been repeated at Worcester, Technology would have won the coveted championship.

The Burch Cups Awarded.

THE cup awarded by Mr. George B. Burch, of Dubuque, Ia., for the best record in the weights has been awarded to J. H. Walton, '99. The other cup, awarded by Mr. Burch, for the highest individual score, goes to Captain Baxter. Both men have done faithful, conscientious work for Technology, and are to be congratulated on their success.

F. K. Baxter, '01, was re-elected Captain of the Track Team at Purdy's, where the Team picture was taken.

The Freshman Record Trophy.

The prize offered last fall by Mr. Frank H. Briggs, '81, President of the Advisory Council on Athletics, to the member of the Freshman class making the largest number of points in the games held by the M. I. T. Athletic Association during the year, has been won by Mr. John Winslow Horr. Following a suggestion made by the winner in regard to the prize, Mr. Briggs has presented Mr. Horr with a double blazer of latest pattern with porcelain inside dish. It is inscribed as follows:—

PRESENTED TO
JOHN WINSLOW HERR, '01,
BY
FRANK H. BRIGGS, '81,
FOR BEST FRESHMAN RECORD
M. I. T. A. A.,
1898-99.

Adjustment of Difficulties.

WE are pleased to announce that the unpleasantness referred to in a recent editorial relating to members of two prominent Institute

organizations, has been satisfactorily adjusted. A meeting of those interested was held, and the matter discussed at some length, with the result that the charges that had been made were proved to be without foundation. It is very gratifying to know that this prompt action has prevented the matter from dragging along through the vacation into another year.

Henry Pollard Long.

It is with deep regret that we announce the sad death of Harry Pollard Long, a member of Course II., of the Class of 1902. Mr. Long died suddenly of a complicated attack of appendicitis, Monday morning, May 22d, at the age of nineteen years and ten months. The funeral took place at his home in Sharon, on May 24th.

WHEREAS, It hath pleased Almighty God to remove from our midst our beloved friend and classmate, Harry Pollard Long, be it

Resolved, That we, the members of the Class of 1902, hereby express our deep sorrow, and extend our heartfelt sympathy to his bereaved family; and be it further

Resolved, That these resolutions be sent to his family, be entered in the minutes of the Class, and be published in THE TECH.

For the Class,

ALBERT EATON LOMBARD.

JOHN MYERS EAGAN.

REDFIELD PROCTOR, JR.

WHEREAS, It has pleased Almighty God in his infinite mercy and wisdom to take from us our beloved comrade, Harry P. Long, be it

Resolved, That we, the members of the Cadet Battalion of the Massachusetts Institute of Technology, hereby express our deep and lasting sorrow over our loss, and extend our sympathy to his family. Further be it

Resolved, That a copy of these resolutions be sent to the family, posted on the military bulletin, and published in THE TECH.

For the Battalion. (Signed)

ZENAS M. BRIGGS, Cadet Capt., Co. B.

HAROLD O. BOSWORTH, Cadet Lieut., Co. C.

ROBERT V. BROWN, Cadet Sergt., Co. D.

ALBERT E. LOMBARD, Cadet Corp., Co. A.

Graduate Class Constitution.

PREAMBLE.

The members of the Class of '99, Massachusetts Institute of Technology, in order that the pleasant relations and fellowships which have been established during the undergraduate life of the Class may be maintained in after years, have adopted this constitution for graduate class organization.

ARTICLE I.

This organization shall be known as the Class of '99, Massachusetts Institute of Technology.

ARTICLE II.

All persons who have been connected with the Class during any one of its four years at the Institute shall be eligible to membership in the graduate class organization, and may become members of the same upon application to the secretary of the Class and payment of such assessments as may have been levied during the current year.

ARTICLE III.

The officers of the Class of '99 shall be a secretary and vice secretary, both of whom shall hold office until death or resignation. These officers shall be chosen in such a manner and at such a time as the Class may direct.

ARTICLE IV.

If at any time the office of secretary becomes vacant, the vice secretary shall at once become secretary. He shall immediately poll the Class for the election of a new vice secretary. In case the office of vice secretary becomes vacant, the secretary shall hold an election to fill the position.

ARTICLE V.

The duties of the secretary shall be to transact all business except that intrusted to committees of the Class. He shall communicate with each member of the Class at least once a year. He shall call meetings of the Class at the written request of not less than five of its members. He shall preside at all meetings until a chairman be chosen. He shall have charge of all moneys belonging to the Class, shall collect all dues as hereinafter provided, shall have full power to act as he may see fit in connection with the Association of Class Secretaries, and shall be *ex officio* a member of all committees of the Class.

On first assuming the duties of office, the secretary shall submit to all men eligible for membership in the graduate class organization a suitable blank on which they may, if they so desire, submit their application for membership.

Whenever the Class fund is exhausted, the secretary is empowered to levy an assessment not greater than one dollar per year—except by special vote of the Class—upon each member. At the same time that such assessment is levied, a statement of receipts and expenditures shall be sent to each member of the Class.

ARTICLE VI.

Any member whose indebtedness to the Class exceeds two dollars shall, after due notification, be deprived of all privileges of membership until such indebtedness is discharged in full.

ARTICLE VII.

The annual meeting and banquet shall be held during December, the date and place to be determined by the Dinner Committee chosen at the previous meeting. The first Dinner Committee shall be appointed by the secretary. At least two weeks before each annual meeting, the secretary shall notify each member of the Class of the date and place at which it is to be held.

Ten members of the Class shall constitute a quorum for the transaction of business.

ARTICLE VIII.

All committees appointed by the Class shall have the power to fill any vacancies which may occur in their membership, during their time of office.

ARTICLE IX.

Every five years a class record shall be issued by the secretary. This book shall contain a record of each member of the Class, and as much matter of general class interest as the editor may be able to procure. The net expenses of the publication shall be defrayed from the Class Fund.

ARTICLE X.

This constitution may be amended, at any time, by a majority vote of the members of the Class in good standing.

All communications regarding class matters should be addressed to Walter O. Adams, Graduate Secretary, 1776 Massachusetts Avenue, North Cambridge, Massachusetts.

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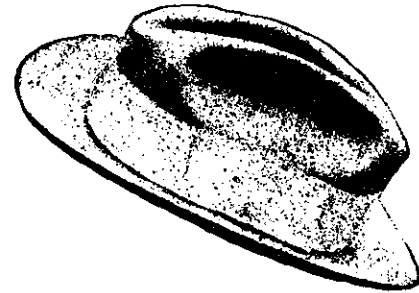
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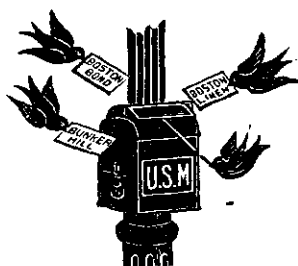
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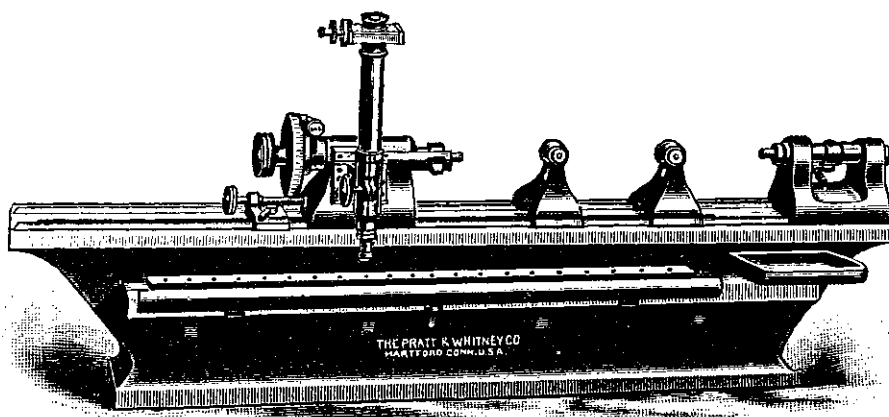
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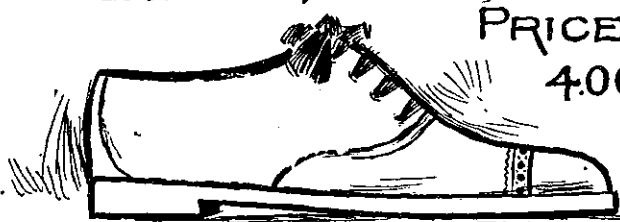
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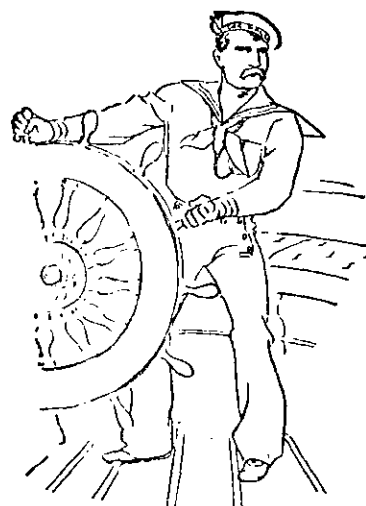
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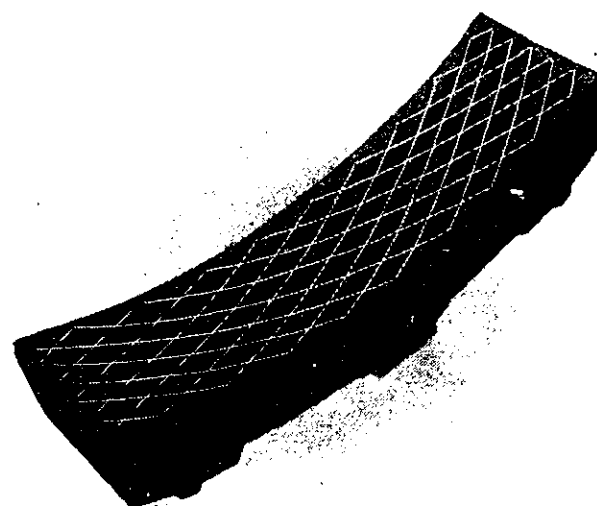
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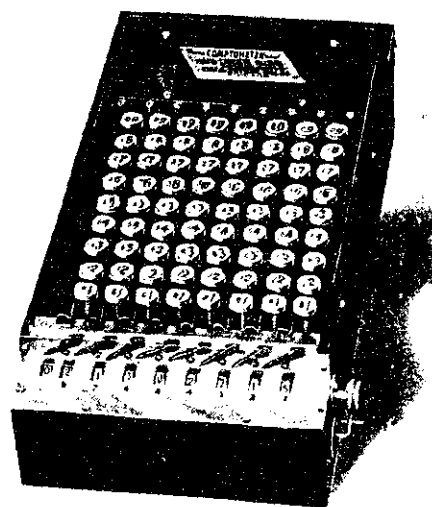
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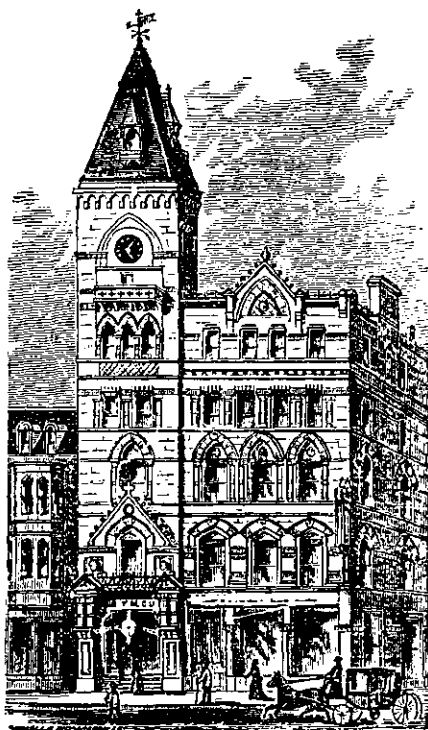
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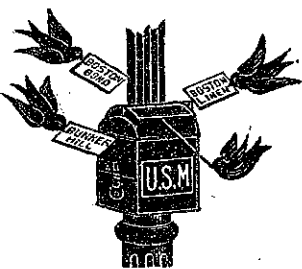
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