

The



Vol. XI.

Saturday, July 6, 1895.

No. 5.

CLASS-DAY NUMBER.

CONTENTS.

	PAGE		PAGE
Frontispiece—W. P. I. Intercollegiate Team, 1895		Ninety-Five's Supper	68
Editorials	51	"End of the Century" Ball Game	68
The Baccalaureate	54	The Work of the Athletes of 1895	68
Class Day	56	Senior Reception	70
Twenty-Fifth Commencement	57	The W. E. S.	70
Addresses Delivered at Class-Day Exercises:		Cleveland Banquet	71
Tree Oration	60	'93's Reunion	72
Data of a Three Years' Test	61	Other Reunions	72
'95. A Tale of Knowledge	61	'95's Aftermath	72
Sociality at the Institute	63	Base Ball Games	73
Farewell Address	64	Entrance Examinations	75
Alumni Banquet	65	Alumni Notes	75
		Technicalities	76

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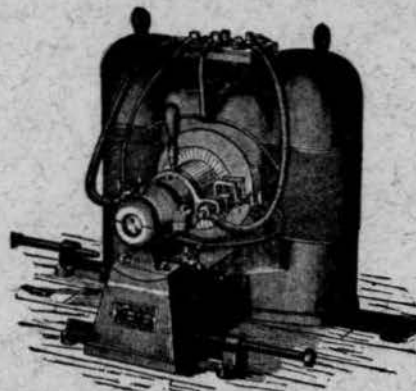
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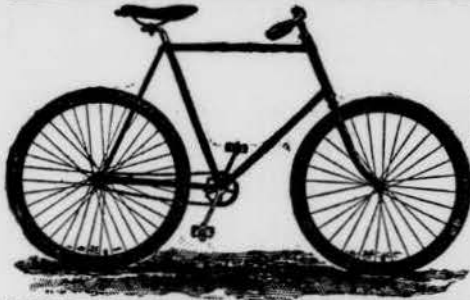
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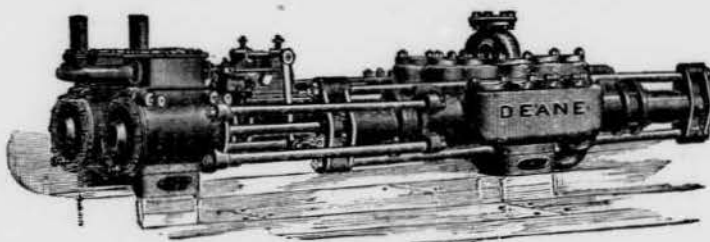
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W. P. I. INTERCOLLEGIATE TEAM, '95.



Vol. XI.

WORCESTER, JULY 6, 1895.

No. 5.

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The W P I is published by the students of the Worcester Polytechnic Institute on alternate Saturdays during the Institute year. Items of interest are requested from students and alumni of the Institute. All matter must be accompanied by the name of the writer. Subscribers who do not receive their paper regularly, or who make any change of address, will confer a favor by immediately notifying the Business Manager.
 Subscription Price is \$1.50 Per Annum in advance. Remittance preferred by Money Order or Cash.
 Remittances and communications pertaining to business should be addressed to the Business Manager. Address all other communications to the Editor-in-Chief.

Entered at the Post-Office in Worcester, Mass., as second-class matter.

With 1895, the twenty-fifth annual class-day and graduating exercises have come and gone. Commencement week has been eventful enough for the most fastidious, and from Sunday evening, when it officially began, has been a round of gayety and interest.

The Class of '95 in leaving has the records, ideals, and successes of twenty-four classes to look down upon and to spur its members on; the members of these classes have made enviable reputations for themselves, and as their occupations appear in the catalogue, certainly reflect credit upon the Institute. '95 ought to do better than any, for the curriculum and opportunities for mastering the engineering profession have become better with each passing year.

'95 is the first class to graduate under the new administration, and as such, marks the beginning of a new epoch.

We shall not recount its triumphs here, but we can truthfully say that its members have shown a loyal interest in everything that was for the welfare of the Polytechnic, and have much to be proud of, not only in the regular engineering work, but also in athletics and in the social functions which go toward brightening a college man's life. The broad basis of the education which they have received here will enable them to enter a great variety of departments of engineering and business life, and apply those principles which have been inculcated at every turn, with intelligence, ease and application.

As a parting word, we would say that the

class leaves at a favorable time, as business is fairly good and constantly growing better. The W P I wishes the members prosperity, that they may soon obtain lucrative positions and maintain a sympathetic interest in those who are struggling in a purpose like to their own and in the students whom they leave behind aiming at the goal to which they have attained.

The year just closed has been an eventful one for Tech in many respects. A new President of the Faculty has come, bringing with him many progressive ideas. The eminent jurist, who so acceptably filled the office of President of the Board of Trustees, has been called away by death, lamented alike by City and State. Engineering buildings have been begun and are now nearly completed. The course of Monday lectures, at which the students have had an opportunity to hear men eminent in their various professions, are sure to have a broadening effect.

The work of the Current Topics Club has been most auspiciously inaugurated. To the men who desire to become quick-witted, not necessarily orators, but to be able to converse intelligently, this society offers excellent opportunities.

By far the greatest improvement of the year has been the partial abolition of that fright of a college man's life, examinations. There is no room for doubt, at least from the students' point of view, as to the wisdom of this plan. It is far better to have tests during the term, thus giving a man a chance to brace up if his record is not what it should be, than to have one grand "round-up" at the end, which causes no end of worry, tends to cut down the marks of the students who have worked faithfully during the term and, from experience, known not to raise the standard of morals. Stricter attention to business during the term and

consequently better scholarship, which are the results of the present system, ought to be a sufficient reason to keep examinations buried beyond resurrection.

Athletics have been given a rebirth. In football, the team lost several hard-fought games and also gained many creditable victories. In the winter the different athletic associations were united with good results. The polo team, which began operations immediately after, covered itself with glory, indeed, more so than almost any of the other teams. The Indoor Meet served its purpose to a charm and ought to be an annual event.

"Shylock, Jr.," or "The Merchant up to Date," was the theatrical and social triumph of the season, and argues well for the adaptability of the average Tech student to any line of human activity. The Class Sports and our showing at Intercollegiate, while not likely to impress an outsider, were very satisfactory to those acquainted with our previous athletic history and the difficulties which blocked the pathways to athletic success. Happily, that era is over. The baseball season had its ups and downs. Several games at the beginning of the season had to be cancelled on account of the weather, which made the outlook dispiriting, but this was soon over and the team played great ball. Not so many victories were won this year as last, due to the fact that better clubs were played, nevertheless the season was fairly successful.

In surveying the field of our achievements of the past year in all directions, the conclusion forces itself irresistibly upon us that 1895 has witnessed a remarkable renaissance.

And now in parting for the summer after such a year of fruitful activity, the W P I wishes the earnest instructor a season of well earned rest and the student one of unrequited enjoyment.

We have called attention in these columns before to the fact that Tech is without an athletic field. That such a state of affairs could exist in an institution that annually meets the representatives of the leading New England Colleges in baseball, football, and on the track, seems almost incredible; nevertheless, it is the fact.

If we were in a crowded portion of the city, where the only chance of obtaining one would be to move buildings from expensive sites, there would be some excuse; but when there are several lots right at our door, it is no wonder that the students continually express surprise that one of them is not taken.

The advantages of such a field are so obvious that it is needless to enlarge upon them to any extent.

In the first place, an athletic field near the Institute, with a grandstand upon it, would be the best located one in Worcester, both in environment and accessibility. With this in view, it is reasonable to suppose that the attendance would make the Athletic Association self-supporting; for there is a good demand for college games in this city, particularly when the grounds are within easy reach.

Of the increased efficiency of our teams, of the increased numbers who would participate, and of the saving in time it would effect, we shall not speak; these things are only too evident.

While looking over the advertisements of the various scientific schools and colleges, almost invariably one of the most prominent features we see mentioned are their athletic facilities; no mean advertisement for any institution, not even for Tech.

Ten weeks will have passed before the students make their initial bow to next term, and it is to be earnestly hoped that a surprise awaits them as they survey the landscape while climbing up the hill.

We notice with infinite pleasure the step which the Alumni have taken to provide a new building for the Institute. The enthusiasm shown by the graduates at their meeting June 19th, cannot but be advantageous to the Institute. Dr. Mendenhall never spoke truer words than the portion of his address to the Alumni which had to do with an Alumni building. The method by which it is expected to raise the necessary funds is an excellent one, and we trust it will meet with the substantial support which it deserves. With her well-equipped laboratories, shops and lecture-rooms, there is one kind of a building sadly lacking. This want the Alumni have, we believe, decided to fill. With a gymnasium, library and Alumni Hall, such as has been proposed, we would certainly be in the front rank in this respect, as well as we now are in our curriculum.

Much as the interest shown at the above mentioned meeting did for those present, we hope that it will also serve to awaken in the heart of every Alumnus a stronger, a more substantial love for his Alma Mater.

It is with genuine regret that the students will learn that Mr. George B. Viles, instructor in German, is to sever his connection with the Institute. A Harvard man, bringing with him from that ancient seat of learning a rare faculty for teaching and getting the best work out of the men, he has also, by his uniform courtesy and lively interest in the doings of the students, achieved a popularity which is the fortune of few instructors.

Every man who has had occasion to come in contact with him will ever cherish his friendship, and sincerely wish him success in his new undertaking.

Welcome, '99. Here's that your star may rise to the zenith and diffuse light to all the nations of the earth!

THE BACCALAUREATE.

The members of the graduating class gathered in Central Church, Sunday evening, June 16, to listen to the Baccalaureate Sermon by Rev. Dr. Archibald McCullagh, pastor of Plymouth Church. There was a large congregation present at the service, including a number of the members of the Faculty and students of the Institute. The Seniors attended in a body, and occupied pews in the front of the church, filing into the church from the library, where they gathered at 7.15 o'clock, and were formally introduced to Dr. McCullagh by Henry J. Fuller, a member of the Senior class.

Rev. Dr. Merriman, pastor of Central Church, occupied the pulpit with Dr. McCullagh, and conducted the opening devotional exercises.

The text was from I Timothy, vi. 12: "Fight the good fight of faith; lay hold of eternal life." Dr. McCullagh said:

"One great fact which biological research has brought to light and accentuates, is that this world is now, and always has been, a scene of incessant conflict among all the forms of life to be found upon its surface. The plants that grow beneath our feet, the trees that clothe and beautify the landscape, are engaged in silent rivalry. Left to themselves they fight out, as unmistakable records have shown, a stubborn struggle, extending over centuries, in which at least only those forms most suitable to the conditions of the locality retain their place.

"Among the microscopic forms of life which people a drop of water and float in the sunbeam, too small to be seen by the naked eye, the same struggle is going on. In their battle for the prize of life, which mirrors in miniature the conflict of ages, countless multitudes perish. Pass into the sphere of human life and look at the difficulties which confront a babe when it lands on the shores of time and commences the struggle for earthly existence. Every child is born practically blind, deaf, dumb, and unable to walk. Its organs of vision have gradually to become accustomed to the light before it can see. Certain re-adjustments have to take place in the ear before waves of sound can pass through it to the brain. The power of speech is gradually acquired, and the ability to walk by degrees attained. How numerous, too, are the forms of disease to which it is heir, and which challenges its right to life! Is success for it in this battle a matter of course? Does not one-third of the human race die in infancy?

"Take a step higher in this ascending scale, where you will have a wider outlook. Even the men who step into the arena of life, fitted by nature, training, and inclination for its duties, and with all their powers and energies apparently under their control, are not always victorious. It is not every man who starts out in life with the determination to attain professional eminence at any price, to make money at any cost, and who, in the pursuit of these things, is ready to stifle conscience, to disregard the counsels of God, and sacrifice true manliness, reaches his desired goal and secures his coveted prize. When Napoleon was a young artillery officer, just beginning to attract attention, the assembly of France, alarmed that a mob 30,000 strong was approaching for the purpose of turning them out of doors and overthrow-

ing the government, was induced to send for him. As he stood before the assembly, the president, after surveying him for a moment with the feeling that, if the safety of France rested upon the shoulders of this young officer, whose shrunken form and pale face gave no indication of the military genius and boundless ambition that were just beginning within him, said: 'Young man, can you protect this assembly?' The stern lips of the young Corsican parted to reply: 'I always do what I undertake.' Writers have invested the name of Napoleon with a glamour that has hid real facts from view. He was a genius, but destitute of principle. He was a man of colossal selfishness, boundless ambition, and tireless energy—traits, however, possessed by Satan himself. He was a continental robber, who walked through blood and broken oaths to the throne of France. This young Corsican, rising from obscurity to be the emperor of France and the most dreaded personage in Europe, is often pointed out as a typical instance of success. But was he successful? Was he not whipped, mercilessly whipped, in the battle of life along the lines which he chose to fight it? Was he not dethroned, discrowned, shorn of all power? And did he not become a querulous, premature, old man, who spent the last days of his life in exile, whining over the indignities to which he regarded himself as subjected?

"Rise to a still wider outlook, where the spiritual element enters and the eternal world comes into view. The higher you ascend in any department of life the fewer do the classes become. There are more Canadian thistles than Yosemite pines or cedars of Lebanon. There are more ants than eagles. There are more who can read and write than can call the stars by name and measure their orbits, paint a madonna, build a parthenon, write an epic. So in the Christian life, the smaller the classes become the higher you rise. There are few Pauls, Chrysostoms, Augustines, Luthers, Knoxes, epoch-making men, who counted not their lives dear unto them so they might finish the work given them to do and testify to the gospel of the grace of God. The first great truth affirmed in the text, a truth whose roots run through all forms of life, is that the Christian's life is a fight; and he who would mould his inner and outward actions by the principles of the gospel must accept it as such.

"In this fight the dangers which beset each life are special. What may be a powerful temptation and great peril to one may be no temptation to another. The reef on which your friend was hopelessly wrecked, the bar on which your neighbor was helplessly stranded, may not endanger your safety, because you are sailing in another direction. There are men whose integrity money could not buy, in whose keeping uncounted millions would be absolutely safe. But there are men who will betray trust, destroy character, blast reputation, ruin friends, risk earthly liberty, and peril their souls for its possession. There are two things which specialize each man's danger. The first is natural constitution. No one questions the law and power of heredity. Physical resemblances, mental capabilities, and model biases are transmissible, and sometimes travel down family and national lines for generations and centuries. A Jew is a Jew, whether in Russia, Poland, Germany, France, England, or America, possessing well-defined features, and traits which differentiate him from men of other nations.

"The history of the House of Stuarts is a striking illustration of inherited and transmitted vicious qualities. Mary, Queen of Scots, was a beautiful woman,

fascinating and bewitching in her manner. Through her mother, she descended from the base House of Guise of France, a house noted for lust, cruelty, bigotry, contempt of truth and love of merciless revenge. These bad qualities she inherited, and was herself sensual, cruel and treacherous. Pass down the line of her descendants, James the First, Charles the Second and James the Second, and the virus of cruelty, lust, bigotry, tyranny and absolute unreliability, runs with increasing virulence, inflicting unbearable miseries upon the nation, until in self-protection it banished them from the throne. Although a man may inherit tainted blood and receive a legacy of disabilities from his progenitors, that does not relieve him from responsibility. It will make the battle harder. No matter where my blood comes from, when it pours through my arteries and flows through my veins, it is mine. If it be heated with passions and poisoned with the drugs of another life, my duty is to calm and cool and purify it. Along what lines does your constitutional tendency to wrong-doing lie? In the presence of what temptations do you most easily surrender? At this point the text takes its stand by your side and says, 'Fight the good fight of faith.'

"The second thing which specializes each man's danger is providential circumstances. Joseph was sold into slavery, carried into Egypt and thrown into the face of temptation in a way he was powerless to resist. Providential circumstances determined the especial danger to which he was exposed. But did that relieve him of personal responsibility? It is easier to lead a Christian life in some places than in others. It was more difficult for Daniel to be a devout and holy man in Babylon than it would have been in Jerusalem. John Stuart Mill was carefully trained in childhood by his father in the principles in atheism. Young Mill had no voice in determining the character of his childhood instruction. Did that fact relieve the future philosopher of responsibility in adhering to and teaching others the principles of atheism through life? Your greatest peril may lie wrapped up in some providential event which you had no direct influence in shaping—an event which you cannot step out of the way of, or push aside, but which you must meet and grapple with.

"The Christian's life is not only a fight, but it is a good fight. It is implied that victory is possible for all men to live up to the light which they possess. It is possible for men to subjugate wrong constitutional biases, rise superior to disadvantageous environments, or else they would not be commanded to fight. That God and all the holy forces of the spiritual universe are on the side of man who is struggling to preserve his purity, maintain his integrity, eradicate the evil that is within him and overcome the wrong that is without him, is a truth taught with increasing clearness from Eden to Calvary, and from Calvary to the present time. What are some of the qualities that are necessary to enable us in this battle to so fight, that at last we can say without egotism, 'I have fought a good fight, I have kept the faith,' and hear our Lord and Master say in response, 'Well done, good and faithful servant, enter into the joy of thy Lord.'

"We need vigilance. 'What I say unto you,' said our Lord to his disciples, 'I say unto all.' Watch.' No man who needlessly and deliberately exposes himself to temptation, in the presence of which he is weak, has any more right to expect God to shield him from moral harm than he would if he flung himself from a beetling crag have a right to expect the law of gravity to be suspended to protect him from physical injury.

"Judas should never have accepted the treasurer-ship of the apostolic band. He should have said: 'Brethren, excuse me, I know myself better than you, There is Peter and John; either of them will make an excellent choice.' As our Lord has taught us to pray, 'Lead us not into temptation,' instead of exposing our weakest points to be raked by the fires of our great adversary, we are to avoid temptation whenever and wherever we can, consistently with duty. This battle demands courage. The mass of men in all ages and in all lands are timid, selfish, cowardly, afraid to strike evils which they know or feel to be evils, because such action would call for energy, imperil self-interest and demand sacrifices. Turn to the pages of history, sacred or secular, or look out on the world of living men along any line, social, religious, municipal, national, and you will find that great reforms are ordinarily started by some one person whose soul is cast in a heroic mould, encountering that evil at first single-handed in face of the opposition of the timid. How much does the world owe to the firmness and courage of Luther, when, before the famous Diet of Worms, he refused to retract the principles and truths which gave birth to the reformation! The emancipation of four million slaves in this land is one of the greatest events of this wonderful century, now so near its close. Did not the movement which resulted in that national act begin with Garrison? In his opening address to the public, in the first number of the 'Liberator,' he said, 'I will be as harsh as truth and as uncompromising as justice. I am in earnest; I will not equivocate; I will not retreat one inch, and I will be heard.' What scorn and bitter opposition had he to bear in the early stages of this battle for the right from the timid, selfish, time-serving masses of men! Emerson's conception of a hero is a man who 'taking both reputation and life in hand, will, with perfect urbanity, dare the gibbet and the mob by the absolute truth of his speech and the rectitude of his behavior.' There are men who, without the quiver of a muscle, or the tremor of a nerve, could face or have faced death on the battle-field, who have not the courage of their own deepest convictions. They know and believe the gospel to be true, but they have not the courage, in the midst of Christless associates and before the world, to confess their allegiance to Christ, and thus make his life the model of their own.

"This battle calls for earnestness. There is no quality of character more communicable or contagious than earnestness. When Demosthenes felt the liberties of Greece were being assailed by Philip, and Patrick Henry felt England was trampling on the rights of the colonies, and when Daniel Webster felt that the perpetuity of the Union was imperilled, were not these great orators able to pour their enthusiasm into the hearts of their countrymen, until the most phlegmatic throbbed with passion and were ready to defend those liberties with the last drop of their blood. Are not the issues of life of sufficient magnitude and importance to cause us to discharge its duties with deep earnestness? What a power one earnest man is! A few Christians shook the Roman empire. We pass through this world but once, and even if we are permitted to fill up its allotted period of man upon earth, that time is too short not to crowd its days with noble thoughts and seize all its opportunities for doing good as golden. The shortest life may be made sublime, for 'we live in deeds, not years; in thoughts, not breath; in feelings, not in figures on a dial. We should count time by heart throbs. He most lives who thinks most, feels the noblest, acts the best.'

"Put on the whole armor of God, that ye may be

able to stand against the wiles of the devil.' In this battle ye fight in good company. The patriarchs, prophets, apostles, martyrs, and good of all ages, make up the goodly company. Angels are your associates. 'Are they not all ministering spirits sent forth to minister to them who shall be heirs of salvation?' You fight for a good cause,—the overthrow of all wickedness and the dethronement of truth and righteousness everywhere. You fight under a grand leader. Jesus is the great captain of our salvation.

"Look at the grandeur of what is at stake. Eternal life. 'Lay hold of eternal life.' Eternal life here does not mean simply never-ending existence. It has reference to quality of life. Our Lord says, 'This is eternal life, that they may know thee, the only true God, and Jesus Christ, whom thou has sent.' 'He that hath the Son, hath life. He that hath not the Son, hath not life.' Eternal life is begun in the believer here, and is perfected in heaven. Men's conceptions of heaven are often colored by their own experience here. Robert Hall was in his time one of the most eloquent men in England. It was said of him by Dr. Parr, a contemporary and competent critic, that 'he had the eloquence of an orator, the fancy of a poet, the acuteness of a schoolman, the profoundness of a philosopher, and the piety of a saint.'

"He was a great sufferer, never free from pain, and often prepared his sermons when suffering bodily torture. It is said that on one occasion, when talking with William Wilberforce on the unseen world, he said to Wilberforce: 'What is your idea of heaven?' Mr. Wilberforce replied: 'My idea of heaven, Mr. Hall, is love. What is your idea?' 'My idea of heaven,' replied Mr. Hall, 'is rest, rest.'

"When Paul thought of the eternal future of the children of God, of their co-heirship with Christ, he exclaimed: 'The sufferings of the present time are not worthy to be compared with the glory which shall be revealed in us.' John declares that although now we are the sons of God, 'it is not yet manifest what we shall be'; that is, there has never yet been set before the eyes of men in this world what the actual condition of the sons of God is to be in another life. While there is great mystery here, yet such hints are given us in the Scriptures, from which much can be legitimately inferred. It is true the most positive affirmations are negations. 'There is no more curse there.' 'There is no night there.' 'And there shall be no more death, nor sorrow, nor crying; neither shall there be any more pain, for the former things are passed away.' An imperfect and momentary glimpse of the possibilities of human nature is given us in the transfiguration scene, when Moses and Elijah stood with Jesus on one of the spurs of Hermon, when his countenance blazed like the sun, and his raiment was dazzling white, like the snow which covered the surrounding mountain peaks. But after all, these are only far off hints of the perfection and completeness of those who have passed into the immediate presence of Christ, and who now with direct, clear, and certain vision behold his glory and are made like Him. 'Father, I will that they, whom thou hast given me, may be with me where I am, that they may behold my glory.' This prayer, previous to his departure, is followed by the promise subsequent to his enthronement, 'To him that overcometh will I grant to sit with me on my throne, even as I also overcame and am sat down with my Father on his throne.' It was clear-eyed faith, the assured hope of eternal life, the glorious expectation of sharing with Christ in the regal splendors of heaven, that enabled Tennyson, at the close of a long

and distinguished career, to sing with his latest breath:

"Sunset and evening star,
And one clear call for me!
And may there be no moaning of the bar
When I put out to sea.

"But such a tide as moving seems asleep,
Too full for sound or foam,
When that which drew from out the boundless deep
Turns again home.

"Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell
When I embark.

"For tho' from out our bourne of time and place
The flood may bear me far,
I hope to see my Pilot face to face
When I have crost the bar.'

"Gentlemen of the graduating class: Your period of preparation is now ended, and you stand on the threshold of active life, face to face with its exacting and stern duties. Let me warn you against going out into the world on a selfish errand. The equipment of head and hand which you have received here through the generous benefaction of the noble dead and no less noble living, is a sacred trust. Make your powers, your influence, your position, through all the coming years, felt on the side of God, and for the highest good of man, until your names are starred, and then the heavens will open to receive you, as they did Stephen of old. I charge you, in God's name, 'Fight the good fight of faith; lay hold on eternal life.'"

CLASS DAY.

Nature smiled bounteously on '95, and favored her with ideal weather for Class Day. The sloping campus beneath the grove of trees never presented a prettier picture; the bright gowns of the women, the sombre black of the graduates, the bunting and streamers which fell in gay festoons about the platform, and the carriages with occupants in holiday attire, which dotted the grounds below, all helped to make a most effective scene. The usual temporary benches, with a seating capacity of five hundred, were inadequate, and settees were brought from Boynton Hall to supply the demand, while a large number lay upon the grass.

The class assembled in the Salisbury Laboratories, and after placing a shovel of earth about the roots of the class tree, formed in line and were escorted by Chief Usher James B. Mayo down the winding drive and across the lawn to the temporary platform which had been erected in front of the seats for the class officers and those having parts in the class day programme.

On the platform were: President Harry Stetson Davis; Class Historian, Alba Houghton Warren; Class Statistician, Henry Stone Favor; Tree Orator, Fred Mason Martin; Class Orator, Charles Arthur Harrington; and the class officers.

The first two rows were occupied by the members of the class, and the third was reserved for the faculty.

President Davis, in extending the greeting of the class to those assembled, said :

"According to a time-honored custom, the educational institutions throughout the country hold commencement exercises, at which time it is the pre-eminent idea to make one and all happy. It is, then, with a great deal of pleasure, that, on behalf of the class of '95, I extend to you all a most hearty welcome.

"Members of the faculty, who have been untiring in your efforts to cultivate and develop in us those qualities and that knowledge which shall make us a credit to our alma mater and to ourselves, to you I extend a happy greeting.

"To you of our friends who have graced this gathering by your presence this afternoon, and who have, from time to time, displayed an interest in us, either individually or as a class; to you who have listened with Christian patience to the tales of our pranks for the last three years,—it gives me great pleasure to extend welcome to the most serious of our pranks—commencement.

"Parents, it is with difficulty that I find words with which to half express our gratitude to you for your many sacrifices and kindnesses to us during our stay at this institution. Many are the cheering words that have sprung from your lips, as in the time of seeming hardships we were depressed. Many have been your trials, and many have been ours. To-day we all rejoice, and it is then that I extend to you, as it were, a double greeting."

The programme was of very neat design, and was as follows :

Planting of Class Tree.

- Music—Overture, "In Search of Happiness," Suppe.
- Greeting—Harry Stetson Davis.
- Tree Oration—Fred Mason Martin.
- Class History—Alba Houghton Warren.
- Music—"Reminiscences of Liberati," Casey.
- Data of a Three Years' Test—Henry Stone Favor.
- Class Oration—Charles Arthur Harrington.
- Music—Selection from "Robin Hood," De Kovan.
- Farewell Address—Clarence Walter Barton.
- Music—"Finale," Reeves.

Mr. James B. Mayo was chief usher, and had as his assistants, Frederick J. Zaeder, Frank E. Congdon, and George S. Gibbs, all of '96.

After the exercises, friends and guests inspected the buildings and shop, which, contrary to the usual custom, was kept running all day.

Custom is slowly but surely tending to make the Class Day exercises, the exercises of commencement week, and '95 is certainly to be congratulated for giving impetus to this movement.

TWENTY-FIFTH COMMENCEMENT.

'95 has been honored above all previous classes, and her Commencement was an especially notable event, as the Governor, for the first time in the history of the Tech, attended the graduation exercises and made an eloquent address. As usual,

the exercises were held in Association Hall, the front of which was prettily draped with flags and the class colors, purple and white, while over the platform was suspended by the class colors, a shield showing '95 in white on a green background. Along the front of the platform was a row of palms.

At a little after eight, the forty-seven men to graduate from '95 and the five post-graduate students filed up the main aisle and took the seats reserved for them directly in front of the platform, on which were Hon. Stephen Salisbury, the newly elected president of the trustees; Dr. T. C. Mendenhall; His Excellency Governor Greenhalge; Senator George F. Hoar; Mayor Henry A. Marsh; Rev. Dr. Merriman, secretary of the board; Mr. Charles G. Washburn, treasurer of the board; other members of the corporation; Rev. H. J. White; Rev. Dr. Alexander H. Vinton; and Judge-Advocate Gen. Champlain, who accompanied the governor.

Rev. Dr. Vinton opened the exercises with a prayer. The introductory remarks were made by Hon. Stephen Salisbury, who spoke as follows:—

"*Ladies and Gentlemen, Alumni of the Institute, Students and Friends:* The trustees desire me to welcome you on this occasion that brings so much of promise and satisfaction to the many here present. To the alumnus the day brings pleasant memories of past experience and the consciousness of progress accomplished. To the graduate it brings a feeling of relief at reaching a goal, and of uneasiness at the broad future stretching away with so little to indicate the best path; and to admiring and sympathetic friends it places in bold relief the excellent qualities acquired and possessed by those connected with the school and in whom they take an interest.

"Since last we met in this hall one of the best and truest friends of the Institute has passed away. I refer to the late president of the trustees, Judge P. Emory Aldrich. The Institute possessed in this excellent man an honest, fearless, able and most laborious friend, whose cultivated mind and keen judgment were constantly occupied with the welfare of the institution. Well, indeed, did he merit and receive the confidence of faculty and student! The memory of an officer so distinguished, sincere and useful will long remain an inspiration and a guide.

"During the past year the trustees have made a conscientious and wise use of the State appropriation given them in 1894; and for an expenditure of a little more than \$50,000 have erected a new mechanical laboratory, a power plant and coal sheds, a house for the president of the Institute, and also a hydraulic testing-plant, with all the machinery necessary for its use.

"In October of 1894 a new president of the Institute came to take charge of what is near and dear to so many of us. From a very broad field of experience, and with a knowledge of many of the most recent methods of solving abstruse problems, he comes to teach us the best way to obtain an education in the sciences. I take great pleasure in presenting to you Dr. Thomas C. Mendenhall, president of the Worcester Polytechnic Institute."

Dr. Mendenhall was received with thundering applause as he arose to respond. When silence once more prevailed, he introduced Mr. W. H. Morse, who was the first speaker of the four who were selected to give abstracts from their theses, his subject being "Test of Feed Water Heaters." The different steps were the more readily followed by means of a chart which was suspended over the platform. Mr. George O. Sanford followed with an abstract on "The Determination of the Co-efficient of a 36" Venturi Meter and a 12" Union Meter," several charts being used, the more clearly to present the subject. This thesis was of peculiar interest as the experiments were made at the new testing-plant at Chaffin's.

"Examination of Sewer Gas for Carbon Monoxide" was the subject of Alexander W. Doe's paper. His theme was by far the most popular of any treated by those reading papers, and contained much of general interest regarding sewer gas and its effect on the public health. He said in part: The two subjects which are of the most vital importance to the municipal governments of to-day are water supply and sewage. Concerning sewage the questions to be answered are "How shall we dispose of it?" and "What are its dangerous features, and how shall we guard against them?" One of these features, long considered to be the most dangerous in effect, next to the pollution of drinking water by sewage itself, is the so-called sewage gas or the air polluted by the gases given off by decomposing sewage and containing micro-organism or microscopic germs.

The experiments thus far made, almost without exception, lead to the conclusion that sewage air is not harmful to anything like the degree supposed; and furthermore, chemical and bacteriological investigations have thus far shown nothing in the air of sewers which can, in the least measure, account for the evil results attributed to it. In the first case it was proved that the normal relation of the house to the sewer was such as to make it exceedingly impossible that air should pass from the sewer to the house. This was first suspected on the discovery of the fact that sewer gas, contrary to all existing ideas, exerts no pressure to get out.

The bacteriological investigations are most interesting. Experiments have shown that animals like rabbits and guinea pigs, after living for several weeks in an atmosphere of sewer gas, exhibit on dissection no signs of poisoning; and, if one may be justified in forming an opinion from these results, it does not seem reasonable to suppose that the air of a sewer, in the enormous dilution in which it must reach an individual in the house, can be of much importance in the direct production of disease.

It has also been found that the number of organisms in sewer gas is extremely small as compared with the number in sewage itself, and was as a rule exceeded by the number in the outdoor air. The species in sewer gas and fresh air agree very well. Further experiments have proven that air forced through sewage known to contain germs of typhoid fever and diphtheria was, on immediate examination, found to contain no such bacteria. These scattered facts in this brief outline have led students of sewer gas to the following conclusions: First, that sewer gas, under normal conditions, is, as far as present investigations show, but very little worse than the air of an ordinary school-room or hall; second, that sewer air depends almost entirely for its composition upon the outer air, and not upon the sewage itself as was formerly supposed.

Mr. Doe then went on to give the methods and the result of his experiments to determine the presence of carbon monoxide, and closed his interesting abstract by stating that from the result of his experiments, which were performed with considerable care, it was safe to conclude that in the gas of the sewage there is present no carbon monoxide, and if there are any poisonous chemical compounds in sewer gas their constitution still remains unknown.

Mr. H. R. Barber concluded the list of four with his abstract on "The Effects of Capacity upon Induction Measurements." The formulæ upon which it was based were obtained from, and original with Professor Kendrick.

After the reading of each abstract, it was amusing to see the Rev. Drs. Vinton and Merri-man exchange smiles at that which was necessarily of a somewhat technical nature; and though evidently not fully understood by them, yet each treatise was apparently appreciated and enjoyed.

After the reading of the theses, Dr. Mendenhall briefly introduced the Governor, who was greeted with great applause, and spoke as follows:

"While I delight to bring you to-night the cordial message of the warm approval of the Commonwealth, I do not bring you merely a verbal expression. Last year, in somewhat more eloquent fashion than I can, the Commonwealth

expressed its approbation of this Institution by an appropriation of \$100,000, and it is a pleasure to me to see the way that appropriation has been utilized. I have seen what has been done and the noble buildings erected, and I am delighted to hear that so much has been done with only \$53,000 of the appropriation. However, I do not wish to make you uneasy by intimating that you ought to refund the other \$47,000. I only wish that the rest may be as well expended.

"I am glad to sit here and drink in the learning that has been placed before us to-night. I am not only surprised, but gratified, to find to what heights of development this noble Institution has come. The Institution is rarely favored. First, it is beautifully situated. The young men of this Institution cannot complain that they are deprived of the influence of the beautiful. Your park, your grounds, even to that Jo Bill Road, which now bears the more euphonious title, Institute Street, have had a wonderful charm to me.

"The crowning success of Worcester has called for the greatest from me. I used to take pleasure in telling how the distribution of real estate was more general in Worcester than in almost any other community in the world. But in this great university of labor of yours—and Worcester may well be so termed—you find that development has come from your having liberal, broad-minded men. In Salisbury and his ancestors (applause) you find the salt and root of this greatness of yours which I, coming from Lowell, naturally look on with a sort of envy. (Applause and laughter). It is a grand thing for this Institution that you have on your Board of Trustees such staunch patriots as my friend, Senator Hoar. In this march of progress of yours, you have had to rob Washington of a Mendenhall. (Loud applause by the students). I hope the professor will not become too popular. (Applause and laughter). There are times when too great popularity is not good, but I know something about Dr. Mendenhall and his work in Washington, and it is good that in this greatest work of teaching, you have the men who know how to teach. And so I think that this applause means that the teacher has been with the boys and is one of the boys. He who teaches should always learn.

"It is a grand thing to see this Institution growing and thriving and spreading. As I have said, I have been interested in hearing the reading of these theses. It is good to know of the transmission of heat, though perhaps a thesis on the transmission of coolness would be better suited to the night. (Laughter). Yet it all goes to the bettering of the world. It is well for us to know these things and I thank my

learned professors in front of me for giving me some of these points. (Laughter).

"I wonder how the plumbers will feel when they know what my friend tells us, that there is little danger in sewer gas. But it is a fact that not a word has been spoken by these students that does not bear directly on the health of the people of Worcester. We desire to make the best use, for the world, of all the powers of the earth, the air and the sea. It is the study of these things that brings to our doors more of health and of comfort. I thank you for the opportunity of being here, and I trust I shall put to some good use the valuable lessons I have learned here to-night."

The presentation of diplomas followed the address of the Governor. Dr. Mendenhall gave a brief sketch of the class, and then presented the rolls, saying: "By authority of the Commonwealth of Massachusetts, granted to the President and the Board of Trustees of this Institution, and by them delegated unto me, I now admit you to the degree of Bachelor of Science, with all the duties, privileges and responsibilities appertaining thereto."

The candidates for the degree of Bachelor of Science were:

Course in Chemistry.

Charles William Albertson, Worcester.
Alexander Wadsworth Doe, Worcester.
Seymour Allston Farwell, Hubbardston.
Herbert Edwin Field, Worcester.
Joseph Arthur LeClerc, Ware.
Joseph Mayo Tilden, Worcester.

Course in Civil Engineering.

Norman Gilbert Burton, Worcester.
Edwin Job Pickwick, Webster.
George Otis Sanford, Westboro.
Bertram Ellsmore Savage, Worcester.
Frederick Howland Somerville, Waterbury, Vt.
William Otis Wellington, Oxford.

Course in Electrical Engineering.

Harry Reuel Barber, Worcester.
Frank Joseph Bryant, Middlebury, Vt.
Harry Wait Cardwell, Norwich, Ct.
Herbert James Chambers, Brookfield.
Martin Harvey Clapp, Athol.
Alvah Wadsworth Clement, Worcester.
Eugene Augustus Copeland, Worcester.
George Putnam Davis, Worcester.
Harry Stetson Davis, Worcester.
George Addison Denny, Leicester.
Albert Eugene Fay, East Brookfield.
Frank Edward Gilbert, Worcester.
George Crompton Gordon, Worcester.
Charles Arthur Harrington, Worcester.
Frederick Henry Leland, Worcester.
Harry Willard Leland, West Gardner.
Timothy Francis O'Connor, Worcester.
Henry Dennis Temple, Worcester.
James Warren Thayer, Worcester.
James Walsh, North Brookfield.
Ambrose Gilmore Warren, Gardner.
Alba Houghton Warren, Worcester.

Course in Mechanical Engineering.

Clarence Walter Barton, North Oxford.
 Charles Converse Brooks, Fitchburg.
 Henry Stone Favor, Gardner.
 Henry Jones Fuller, Springfield, Mo.
 Frederick Matthew Hitchcock, Westfield.
 Albert William Howe, Clinton.
 Arthur Dwight King, Monson.
 Fred Mason Martin, Bradford, N. H.
 William Horace Morse, Jr., Worcester.
 Robert Henry Taylor, Oakland, Cal.
 Harry True Van Ostrand, Millbury.
 Arthur Wellington Walls, Worcester.
 Vail Warren, Springfield.

GRADUATE STUDENTS.**Course in Mechanical Engineering.**

Louis Roellas Abbott, New Britain, Ct.
 Harry Lewis Cobb, Worcester.
 Harry Carver Hammond, Worcester.
 Theodore Herrick Nye, Worcester.

Course in Electrical Engineering.

Murray Clifford Allen, Yarmouth, N. S.

The announcement of the winners of the graduates' aid followed. President Salisbury spoke briefly of the origin of the aid. He said that in 1871 a fund of \$10,000 was provided, the income to be divided among those finishing their course with the greatest desert. Dr. Mendenhall announced as the winners for the year of the \$75 prizes, the following:

Harry Reuel Barber, Worcester.
 Martin Harvey Clapp, Athol.
 Seymour Allston Farwell, Hubbardston.
 William Horace Morse, Jr., Worcester.
 Charles Arthur Harrington, Worcester.
 Ambrose Gilmore Warren, Gardner.

The exercises closed with the benediction by Rev. Dr. Vinton.

ADDRESSES DELIVERED AT CLASS-DAY EXERCISES, JUNE 21, 1895.
Tree Oration.

FRED M. MARTIN.

Mr. President and Friends of the Class of '95:—

As is the universal custom throughout all the colleges of the United States, we have assembled to-day to plant a young and thrifty tree. From the time we entered the Institute we have been looking forward to this day, not as the culminating point in the plot, for that was reached last week when we learned who of us were to graduate.

I say a plot; for it seems as if the powers that be and the people that are, I refer to my classmates, have ever been in doubt as to who should stay and who should go. Can you doubt it, when it is known that in the beginning we were anxious to get into the Institute and they, the powers that be, as is the custom, were opposed. Then those of us who were successful wished to stay, but ever and anon, we received communications from the office and signed by the clerk stating "your mark is not 100." And, lastly, when we wished to get out, they seemed anxious that we should stay.

Prior to our entrance, we were mostly strangers; but drawn together as we have been, most intimate friendships have been formed. It has been manifested in a strong class spirit, in athletics, and in most of all, good-fellowship.

To-day we have all borne a hand in the planting of the class tree. It signifies to us that in the past there has been naught but sympathy and healthful companionship, and that in the future our relations with one another shall always be the same.

We stand upon the eve of graduation and can look back upon the three and one-half years as years well spent. With satisfaction we remember the long hours of weary work in shop and in class-room. Hours of work which would have been tedious but for the diversity of work encountered; for we not only forged ponderous and glowing masses of iron in the blacksmith shop, and ran the lathe at lightning speed, but sketched Trilby feet from plaster casts in the model-room of Prof. Gladwin.

We have now a foundation upon which to build, a foundation well laid, and let us hope the superstructure will well repay the labor of its building. Some may regret hours misspent or work slighted; but they are past and gone now, and why repine for that which is past our power to recall. Our work now lies in front, not behind us, and "forward" should be our motto. Let us not waste heart and life thinking of what might have been and forget the may-be that lies before us.

It is a well known fact to those acquainted with the laws of the vegetable kingdom, that the tree, through the pores of its leaves, purifies the atmosphere of a deadly carbon dioxide, which we are constantly exhaling. As the leaves of the Institute, it is our office in the scientific world and in the practical mechanical world to meet and to vanquish those superstitions and fallacies that cling to and hamper so many people to-day. Like the limbs that shoot forth from the trunk, so shall we go out from the Institute seeking success in the various paths of industry and commerce, to mingle with the whirling throng that rolls and tumbles along the great high-road of life. Fortune will smile on some, but to the most of us success means tireless industry, perseverance and honesty. The chemist with head bowed over retort and beaker; the electrician with the instruments of his calling; the civil engineer with level and transit; the mechanic amid the whirl of wheels and the ring of the anvil,—shall all help to carve and smooth the road over which humanity marches.

Just the other day, when we were "Preps," how far in the hazy future looked the summer of '95. We could scarcely realize that the time would fly so quickly. We saw then the paths of science narrow; but as we went on they widened and lengthened, until like mighty highways they stretched into the distance as far as the eye could reach.

Thus it ever is. A new life begins for us with every second. Let us go forward joyously to meet it. And now that we have left our tree, with the Institute as its guardian we might say, we hope that that its growth may be rapid and healthful. May its leaves furnish shade to many a generation of students. It will prove a good mentor, for it can tell them of naught but deeds well done by its planters. When we return in future years, may this tree of ours have seen the grading of an extensive campus, and the building of a spacious gymnasium; and then in the springtime and in the autumn will the breezes waft to its ears the victorious shouts of her athletes on many a stubbornly contested field.

Data of a Three Years' Test.

HENRY S. FAVOR.

A test, according to Webster, is a critical and decisive trial; that for which anything is compared for proof of its genuineness.

A critical and decisive trial—shall we employ *these* adjectives in describing our course at the Institute? It is true there have been critical times; they were in the habit of occurring every six months, under the name of the semi-annual examinations. But if we consider the *whole* period, as we were taught to do in mechanics, I would please to refer to our three years' test as a preliminary trial; the decisive trial is yet to come when we compete with our fellows in life's battle.

Now a test, as we were wont to apply the term in the laboratories, is a determination of the efficiency of the machine or plant tested. The efficiency being the ratio expressing the relation between the work taken out and the work put in.

Let us determine the efficiency of the class of '95, and compile the log of the test.

As you would naturally expect, the description comes first. There have been, including occasional contributions which we have received from the class of '94, just 101 men in the class of '95, forming a body of mortals of most diversified tastes, temperament, appearance, and ability.

The class (I now refer to the graduating class) is homogeneous in some respects. Thirty-nine members are staunch Republicans. The eccentricities, of course, are among the chemists. This small department boasts of containing a Democrat, a Liberal, an Independent, and an Anarchist. The latter, however, takes female parts in Tech theatricals, and is perfectly harmless.

The majority of the members of the class attend Congregational Churches. Second place is a tie between the Methodist, Salvation Army, and Home Mission. One member, who wrote home to determine what Church he attended, has not voted as yet. This vote may affect the standing for second place.

Just here occurs a little inconsistency, or possibly by compiling this data I have brought to light a new truth, never before exposed. At any rate, while a large per cent. of the class profess to entertain strong orthodox convictions, this same large per cent. has voted *beer* its favorite drink. One man endorses Hood's Sarsaparilla, but water, cold, sparkling Holden Reservoir water, is a strong second.

The average expenditure per year of a student attending the Institute, tuition included, is \$645.25. This does not include the chemists' breakage bill, nor the semi-annual assessment for soap in the shop.

I am aware that calculations are odious, but pardon this *one*.

The total weight of the class is 7,650 lbs.

The height of Boynton Hill is 61 ft. In going up the hill once the class exerts 466,650 ft. lbs.

If we go up twice a day we exert 933,300 ft. lbs.; or in $3\frac{1}{2}$ years we have exerted 898,301,250 ft. lbs.

The engine at the shop, we will assume, requires 20 H. P., or 660,000 ft. lbs. per minute.

Hence we have exerted power enough in climbing the hill to run the shop engine 1,360 minutes.

The height from the ground floor to the top floor in Boynton Hall is 35 feet.

In the freshman year we exerted 47,250,000 ft. lbs. in attending chapel; in the sophomore year 12,361,000; in the junior year 6,491,000; while in our senior year, the 130 pound chemist who attended chapel

(his case is the only one worth considering) exerted 136,500 ft. lbs. of work, making a total of 66,238,500 ft. lbs., which is not power enough to run the engine while the mischief done by the juniors is being repaired. Conclusions on this line are unnecessary.

Young ladies, I now have a sad item which I have hesitated to present. Fifteen of these promising graduates have expressed their solemn and final intention never to marry. Let us hope that time—and the numerous suspender buttons which it will be their lot to sew on—may soften their hearts of flint.

But wait! Here is encouragement, surely. Two men say that they intend to marry twice, and another who is doubtful will probably "take unto himself a wife," if he gets over \$9.00 a week after graduating.

The combined age of the class is 1,102 years.

The average age of members of the class is 21 years 7 months and 6 days. The youngest is 18 years old and the oldest 25.

The combined height of the class is 290 feet. Were we to stand on each other's heads we would make a column that would cause Bunker Hill Monument to turn green with envy. The tallest man is 6 ft. 3 in., a giant compared with the shortest, who is 5 ft. 4½ in. tall. Would not a full-length, composite photograph of the members of the class be a most interesting study?

Without indulging in flattery, I think I am safe in saying that the dominating expression of the face would indicate character and ability. But the muscles of our athletes! Can you not see them distinctly? It was those sinews that won the class championship banner at two successive athletic contests.

You would no doubt look questioningly at the feet pictures in this photograph. Here the odds are against us. That pair of hippopotamus hide, quadruple-soled boots, of which you have read in the "Aftermath," certainly indicate a deformity.

But be as critical as you may, do not the good qualities predominate?

The description has been extended, the conclusion must be brief.

For three and one-half years the majority of us have been connected with one of the most thorough institutions which the land affords. We have daily had opportunities to increase our store of knowledge, from which we must draw continuously in the future. Then, as I have already said, will occur the critical and decisive trial. And not till then can we be rated according to our true worth.

'95. A Tale of Knowledge.

ALBA H. WARREN.

To those of you present here, who have not been with the Class of '95 in its labors and in its gambols, this title means but little. Yet what a throng of memories it conjures up in the minds of those who have helped to make the history. The tribulations, examinations, and all the petty trials of college life, perhaps in more than ordinary numbers, have been our lot. And yet, our existence has not been an unhappy one during the past three and one-half years. We have tasted the pleasures of class friendship, though not so freely as others may have, in institutions where the course of study is less exacting.

One duty done, we turn to meet the next. To-day we step forth from the fostering care of our kind instructors, and turn to face the rude world. To-day, we stand forth for the last time as the undergraduate Class of '95.

On January 20th, 1892, we gained our first experience in Tech exams. With fear and trembling we awaited the result. Sixty-three men were allowed to enter, and told to report to Sir Roger Badger, "Keeper of the Seal," and Prepdom ruler in the Washburn Shops. The advent of these men broke the impending corner in blue-drilling overalls and jumpers, and raised the price of carpenters' rules.

What youth, what beauty, what genius, composed Mr. Badger's audience on that first morning in the Shops! His discourse, one of many, was on the duties, dangers and obligations of our position; and then we sawed wood. Some of us, perceiving that our neighbors' piles of blocks did not increase rapidly, attempted to give aid, but our efforts were misunderstood, and our charitable intentions foiled.

The strain attendant on early rising was most severe upon our delicate constitutions, and our joy at the close of the day's labor was exceeding great. Indeed, this strain was so intense, that after four days the Doctor took it upon himself to give five of the more feeble men a short vacation. That his consideration was necessary, is shown by the fact that two of the men have since given up the fight, one going to Annapolis, the other to Harvard.

During our second week, we received two recruits from M. I. T.

In addition to our wood-room work we paid regular visits to Professor Gladwin, Mr. Coombs and Mr. Beals.

Solid Geometry and advanced Algebra supplied reading for our evenings, and made the half-year much harder for us than for any former class. However, we lived in the hope that future years would be the easier, by the same amount as the Prep year was harder than for our predecessors.

We early gave indication of our athletic prowess, and incidentally showed our love for '94, by engaging in two snowball battles with them. The first was a decisive victory for '95, and we managed to "draw" the second, though greatly outnumbered.

Certain of the beaux of the class, deeming their reputations tarnished should they not provide pleasures which could be shared by their fair friends, arranged a sleigh-ride to Westboro. The affair was a great success, although it was well into the wee sma' hours when the 'bus returned to the city.

As time went on and our awe of upper-class men wore off, we mustered up courage to put forward artists for the minstrel show, and the Institute Banjo Club was but an enlargement of our class organization of the same sort. The trip of the minstrels to Upton will ever be remembered for its many sensations, and '95's representatives were quite as conspicuous as their elders.

Shortly after the Spring recess occurred an event of the deepest moment to the Institute and to our class. The death of Professor Edward P. Smith was announced to us on the morning of May 4th. Dr. Smith's personality was remarkably strong, and we felt that much would have been gained to us could we have had the influence of his enthusiasm.

The beautiful Spring days passed rapidly, and we exchanged sketch-books for the examination paper. Most of us managed to get through in Algebra and Geometry, and then we separated for the Summer.

The half-year had been productive of two events of importance: The Washburn Mechanical Engineering Society, since called the Washburn Engineering Society, was founded; and compulsory chapel was abolished. The shop addition was started during the Summer.

In September, six men failed to return, but their

loss was compensated by the addition of twenty-five men in the Chemistry and Civil Engineering courses, making a total of eighty-two Juniors.

As we had entered on a new scheme of studies, our work was curiously arranged; but no matter how difficult, we consoled one another by the remark that the Faculty must let up soon, or graduate us at the end of our Middle year. Neither happened, however.

Our hour plan required us to attend recitations (provided we feared over-working the sick excuse), on Trig., Inventional, English, Dutch, Chemistry and Physics. The Autumn passed uneventfully, although the football team, aided by the brawn and muscle of '95, made a good record. January furnished some excitement. The examinations took from us eleven men; and '93, presumably to keep up our spirits, asked our aid in putting to a proper use, the wood which '94 had purchased for its bonfire.

With the opening of the new term, we launched forth in new waters. The boundaries, o'er which the foolish tried to pass, were made known by Analyt. The air was rent by the chords and discords of Descript. Mechanical drawing became our pastime, and Trig., Inventional and English, became mere memories.

We attempted to do battle with '96, then entering on Prep life; but the fates, or rather the professors, were with them, and excused them from practice early in the afternoon of the appointed day, thus delivering them from our wrath.

The Tech Burlesque, "Jack and the Beanstalk," was presented two evenings in the middle of May. It was a revelation to friends of the Institute, and a success—instantaneous and great.

Athletics! As has been said, here '95 was in her element, and she walked off with the banner and a score larger than the sum of the points scored by all the other classes; and that after everyone had been prophesying big things for '94.

The next Autumn we returned not as Middlers, but with our old title of Juniors. This is explained by the fact that the Faculty had changed the course of study in the Institute to four years, with '97 as the first Freshman class. We Juniors were at once initiated into the mysteries of Calc.; and Poly Con and English Lit., also haunted our waking hours. We soon learned that thought was not necessary for speech, and here at least demand did not create supply. The hour-plans differed somewhat, but the Mechanics were obliged to spend 36 or 37 hours a week at the Institute. The idea dawned on a few that, perchance, the reason for our extra Prep studies could be assigned to a desire on the part of our professors to teach us more; and great was the rejoicing thereat.

On October 27th, the class felt, for the first time, the finger of death. Frank B. Dove had been a favorite with all, and his loss was deeply mourned.

The football schedule showed games with several large colleges, and much interest was displayed in the practice of the eleven. The boom was aided by class rivalry, as many men played on the second eleven to get in trim for the class games. Ah! shall we ever forget that triumph? Back and forth went the ball, borne first by '94 and then by '95. But we were not to be withheld, and when it was all over, the championship was ours; '94 was beaten 6-0.

The energies of the class were soon occupied in preparation for our Half Way Thro' Supper. It was decided, early in the Fall, that Worcester could furnish no amusement commensurate with our abilities for enjoyment, and with characteristic boldness and

perfect unanimity, the class selected Boston as the proper place for holding the banquet.

Examinations had certain claims upon us, but at last we were free, and on Friday afternoon, January 25th, the class started for the scene of festivities.

Certain upper-class men instituted a scare, which served but to show the tireless activity of '95, and its genius for detective work.

After an evening spent at the theatres, the class assembled in the banquet hall of one of Boston's largest hotels, and the fun began. The menu cards were very attractive and the grinds were bright. Supper over, we gave our attention to musical specialties, which entertained us till train time. And as we slumbered peacefully on our early morning ride, we had a dream, in which we heard voices of bearded youths, as from afar, saying: "We bow down to thee, Oh '95, our conquerors;" and still again, from down-covered lips, came the shout: "Well done; our aim shall be to equal."

The Spring term passed rapidly on its course. No burlesque was to be produced, so base-ball and track sports busied us. The Inter-Class meet was a *cinch* for us, but our ardor was cooled when the Institute failed to score in the Inter-Collegiate games. The ball team made a fine record; the best Tech had ever shown in that branch of athletics.

During the Winter, the Legislature of the State granted the sum of \$100,000 for the equipment and advancement of the Institute. Plans were made, and with the close of the Spring term, work was begun on the new Mechanical Laboratory and on the Power House. In addition, work was pushed on the Hydraulic Plant at Chaffinville, which was presented to the Institute by our friend and benefactor, the Honorable Stephen Salisbury. While we, as a class, are not to enjoy the benefits accruing from such increased facilities for instruction, we nevertheless perceive the advantage to future classes and the great influence on the growth of the Institute, and are ready to add our mite of gratitude to that due the promoter.

Notable among the events of the year was the substitution of the ten per cent. system of cuts for the old excuse-book régime.

At the close of the term we learned, with deep regret, that Dr. Homer T. Fuller, President of the Faculty, was to leave. Each one of us realized that he had lost a friend who stood ever ready with sympathy or counsel, and one and all felt that a change, so late in our course, must be of disadvantage to us. We had enjoyed the high-tide of prosperity brought the Institute by Dr. Fuller's earnest labor, and knew the extent of our indebtedness to him. Remembering this, it was with great sorrow we bade him farewell.

Fifty-six men returned last Fall to uphold the dignity and combat the difficulties of a Senior's position.

Thermo and Steam supplied heat for the Mechanics, Organic made the Chemists change color, and Bridges were the bane of the Civils. Civil Government, with its attendant debates, furnished our only intellectual recreation.

Dr. Thomas Corwin Mendenhall, our new President, arrived in October, and almost instantly won the liking and respect of the students. This feeling remains unchanged, save that it increases. But few innovations were made on the President's arrival; these few mainly in the direction of added lectures. Every two weeks noted specialists in different departments of science, address the students, as a whole, and each week we Seniors have listened to the Doctor's interesting talks on "Astronomy, Relative to the Earth."

The foot-ball team showed the improvement over

the preceding season, which is expected in every progressive college. No class games were played.

Several mass meetings of the students were held, and on December 12th a new athletic association was formed, comprising the old foot-ball, base-ball, track and polo associations. It was also voted, the Faculty approving, to give a burlesque.

Examinations now interrupted the current of our work for a moment. When we recovered, we found the blow had been an awful one, and many were the anathemas called down on the devoted heads of our instructors. However, fifty-one of us kept on in pursuit of the coveted sheepskin.

The Indoor Games of the W. P. I. A. A., which occurred March 14th, were a decided innovation, and in them '95, which is an exceptional class, again demonstrated that brains and athletic ability never go hand in hand. In spite of all predictions, '95 won the team races easily.

The death of Judge P. Emory Aldrich, President of the Corporation, cast a gloom over the whole Institute, and removed one of our greatest benefactors. His earnest, efficient labors have had their influence on the education of each one of us. Let his career be an example to young men starting on life's hard journey.

Soon afterward came the Spring recess. Oh, height of irony! With nothing to do but write essays and special reports, inspect steam plants and start our theses, we might well have exclaimed, in the language of the poet, "We have time to burn." In addition to the above, most of us were hard at work preparing for the burlesque. The time passed rapidly, college opened, and then on the evening of April 26th, the students of the W. P. I. presented on the stage of the Worcester Theatre, "Shylock, Jr.; or, The Merchant up to Date." Loud were the praises and expressions of surprise heard on all sides. Even the Faculty were dumbfounded; at least they have said but little about it. The play was twice repeated Saturday, the 27th.

When the excitement was over, the Senior Thesians went back to their theses and became as "busy as A B."

May sped quickly by; base-ball filled the air, but still we worked. June came, exams blocked our path, but we would not be withstood, and now we stand forth to receive our degree and do battle with the wicked world.

"Sociality at the Institute."

CHARLES A. HARRINGTON.

Those of us who are even slightly acquainted with the different lines of mechanical progress know that almost continually improvements are being made in that department of science. Sometimes the improvement is the innovation of an entirely original piece of apparatus; at other times a slight change in some machine, already designed, benefits the mechanical world quite as much. In fact, the advance of our science to its present intricate and elaborate stage of development has been made by steps that led to details rather than to massive invention. Moreover, we notice that improvements, especially improvements in machinery, are suggested by men who had to do with the practical part of mechanical work. Again, suggestions are often made that are of no practical value; but I consider that he who has tried to advance his science and has failed, is far better than he who never exerts himself to find the proper means of improvement.

So if your orator, in his statements to-day, fails to suggest any practical means of improvement, he must be pardoned. It is his desire to examine the influence of sociality on Tech life from the standpoint of a student who has spent three and one-half years at our Institute, to see what forces are working for and against his development, and to point out, if possible, in what ways the students may be benefited by changes in their social relations with each other.

Going back to the beginning of civilization, and tracing its growth to its present high state of perfection, we notice that concurrent with its advance has been the strengthening of social relations among the members of the community or nation. The prevalence and growth of a philanthropic spirit in the ordinary walks of life is a certain index of a steady, social development. An excellent example of this fact was afforded by the statement of the Hon. Joseph H. Walker, when he said a few days ago in his discourse to the students of this Institute, "More legislation in congress, to-day, is accomplished on account of the popularity of the proposer than by all other means combined." That ever-increasing policy of the fraternity of men has already become dominant over the fiery passion aroused by the most eloquent debate, and proof against the most careful manipulation of skilled politicians.

And now as to the existence of the fraternal feeling among our fellow-students. We are bound together by a strong tie; a common affection to our alma mater. We are brothers. Do our actions justify the statements? Surely, there seems need of some slight suggestion, which, if agreed to and followed by all, will cause some change for the better in our social relations with each other.

To be sure there are many ways in which the student-body is handicapped in its desire for unity and college patriotism. Unlike most other colleges, there are no dormitories or dining-halls connected with our Institute. The students are scattered to the four winds when not attending to their duties upon the hill. The lack of occasions when all may meet outside the recitation-room is to be deplored. The abolishment of compulsory chapel, whatever it may have done in other directions, has done more to break the unity of our Institute than one would at first suspect. Should our social lethargy be wondered at when opportunities for meeting each other are so rare that no one of our number, I venture, is acquainted with 75 per cent. of the students who attend here.

And thus our social growth is stunted. But let us look at the brighter side and observe the influences working to overcome these evils. Perhaps first I would place the existence of athletics in its various branches. No other one thing brings more men into prominence, and into close and friendly relations. No athlete can associate with a fellow-contestant without feeling that there exists a closer relation between them than there was before their common struggle to gain honor for their college. No student can restrain a growing respect and love for those who represent him in the different collegiate sports. Even in the class contests there lies a great influence; the friendly rivalry strengthens to a considerable degree the class patriotism, a measure of the existing amount of sociality. Naturally, under this subject, one must mention the societies. Those organizations, for the development of some special educational branch, are not without their social advantages; but more marked is the influence of the so-called secret bodies. From a society, the avowed purpose of which is the development of a strong fraternal spirit, must necessarily emanate a beneficial effect, provided we regard its

members, not as men who wish to hold themselves aloof from us, but as students who desire an intense social life than the Institute and class associations now afford.

Having thus seen the condition and strength of the social spirit among us, what means for its culture are at our command? In the first place, every individual should take an active interest in any enterprise common to all. Our college teams should be the pride of every student. That man who never attends any of the various athletic contests lacks that interest in his college which marks the lively, progressive student. And I am afraid that there are such among us; in fact, a number much too large. So in this direction, at least, we can improve and strengthen the bonds of friendship by a common interest in our athletic representatives. But there is another means of improvement which has never been tried by the students of this Institute, and which, if used, I think would meet with the approval of both the Faculty and the students. We should have some chance to meet on a strictly social basis. The junior promenade, receptions, etc., may supply the demand in other colleges; but we need a social event, or social events, which all may attend and enjoy. To go into details would hardly be proper here, but the suggestion is before you.

And now, why have I made the social element of college life so prominent? Why have our relations, socially than otherwise, been discussed? Consider a young man, about to step from the fostering care of his alma mater out into the world, with none but his own resources to fall back upon. Will any one dispute the statement that an appreciation of the meaning of sociality among men is necessary for his complete success in life? Who is the successful man? He who has only a fine education and much aptness for acquiring knowledge? Rather, he who is weaker perhaps in these qualities, but who knows and feels the meaning of brotherhood among men; who knows how to conduct himself to advantage among others. And if he be a college graduate, we may be sure, if we examine his college life, to find that he was a man active in a smaller sphere. His social relations with his fellow-students and his college patriotism now stand him in good stead. These qualities have developed: the one into an ability to move properly among men; the other into that great and necessary quality of a true American citizen,—patriotism and love of our noble country.

Farewell Address.

CLARENCE W. BARTON.

Mr. President and Friends:—

It has been a great pleasure to us to have from you all this expression of interest which is implied by your presence at these exercises.

To-day is the day toward which we have been looking for three and one-half years. And now that it is come, who can say that he is glad that it has arrived, or will be glad when it is past?

To the graduating class, this day is of the greatest significance. It is the dividing line between our college life and active business life. It is the day on which we must say farewell to one another, and loosen the knots of friendship which have been so firmly tied during our course. It is the day when we must say farewell to the Institute, the Faculty, and our Worcester friends, and prepare ourselves to take upon our shoulders the responsibilities of the community where circumstances may place us.

It is often said that we never do anything, consciously, for the last time, without something of sadness. We, the class of '95, half regret to come to this closing part of our class-day program, and to the last of our student days. We regret to say good-bye to our Worcester friends and friendly Worcester. And yet we like to look forward to the life for which we have been preparing; for we hope that in that life, we can, in some way, prove ourselves useful men and worthy participators in the affairs of the world.

We could take this time to look back upon the happy years of our course; we could review our successes; we could dwell with regret upon our failures; but let us rather spend the few minutes set aside for this part, in contemplating the department of activity in which we are to strive for honor, and in thinking where our opportunity, if we are worthy of one, will lie.

In early days, the minister was the social leader in the representative community of farmers, and all life revolved about the village church. Later the physician came in to share to a degree the honors and duties of the clergyman. Then the saw-mill and little textile factories developed into the great manufacturing industries, and now it is the employer of large numbers of operatives, who holds to a considerable degree in his hands, the religious, social and mercantile interests of the town. This little king has often been a tyrant; he has often used his power unduly for his own further aggrandizement; but now this selfish tyranny is giving way to wise, discerning philanthropy.

The ideal of the broadly, scientifically trained engineer of to-day is no longer the grasping money-king, using his employes as tools to raise structures of his own; but it is to be the organizer of men for the sake of bringing out the best there is in them, the guide of large interests for the sake of developing the community, the wielder of scientific knowledge, softened and humanized by a study of the past, for the sake of greater public benefit.

He has received training in school or college, which has made him sensitive to beauty in nature, in literature and character. He has studied affairs, and his opinions are the outcome of convictions, the result of thought, not emotion or inertia. His heart is warm toward his fellow-men, and his eagerness to help him is tempered with wisdom and trained judgment, not swayed by selfishness or sentiment.

He is the leading man in the community; the support of the clergyman through his sound practical sense; the ally of the physician through his ability to furnish material aid to the distressed; the mainstay of the merchant through the patronage of his body of well-paid employes; he is the patron of the library and public-school system through his appreciation of the real possessions lying in mind and character only.

We shall not, many of us at least, realize this, our high ideal; but in our varying degrees we may work toward it, and, however we may be placed, let us not shirk our responsibilities as men of education, as influencers, to a greater or less extent, of men's thoughts and emotions.

Such is the ideal toward which a Tech graduate should strive. Let us ever be awake to our opportunities; forgetting those things which are behind us and reach forth unto those things which are still before us.

"New occasions teach new duties; time makes ancient good uncouth;

They must upward still and onward who would keep abreast of Truth;

Lo, before us gleam her camp-fires! we ourselves must pilgrims be,
Launch our Mayflower and steer boldly through the desperate winter sea;
Nor attempt the Future's portal with the Past's blood-rusted key."

Fair city, with your wealth of helpful libraries, cordial Churches and kindly homes; Polytechnic, with your familiar halls and laboratories; instructors, with your tasks and your sympathies; fellow-students, with your burdens and your opportunities,—we bid you all an affectionate farewell.

Classmates, let us be up and doing for the honor of our homes, of one another, and our alma mater.

ALUMNI BANQUET.

Greatest in History of the Association.

Whenever and wherever Tech men gather for social enjoyment, then and at that place there is bound to be enthusiasm and royal good-fellowship. The annual banquet of the Alumni Association, which took place in the Y. M. C. A. building, June 20, emphasized this fact most decidedly, with the result that an Alumni building is in the embryo state.

Dr. Mendenhall, in his address to the Association, was the first to bring up the subject, saying the great body of the Alumni should have an Alumni building at the Institute.

The company took up the plan with great enthusiasm, and before the meeting adjourned, \$5000 had been pledged. Work on raising the \$50,000 which the Association voted to raise, to be paid within five years, for the erection of an Alumni building, will be begun at once.

Before the banquet there was a short and rather informal reception in the parlors of the Y. M. C. A. building by the officers of the alumni to the faculty and other invited guests. Every member of the faculty was present at the reception. President Stephen Salisbury of the board of trustees was also present.

Shortly after 8 o'clock the company marched into the hall, where several long tables extended from the stage to the door. The guests were seated at a table running across the hall near the stage, with President H. W. Wyman in the seat of honor at the head. On either side of him was President Salisbury of the board of trustees and President Mendenhall of the faculty. The remainder of the table was occupied by members of the faculty.

Among those present were:

James Logan,
Frank E. Appleton, '74,
Clarence A. Chandler, '74,
U. Waldo Cutler, '74,
Henry S. Howe, '74,
Herbert J. Russell, '74,
Enos H. Bigelow, '75,
Leroy Cook, '75,
Herbert B. Knight, '75,
Charles G. Stratton, '75,

Charles G. Washburn, '75,
Charles G. Whitney, '75,
Luther H. Bateman, '76,
John F. Kyes, '76,
William B. Medlicott, '76,
Lowell M. Muzzy, '76,
John G. Shackley, '76,
John G. Woodbury, '76,
William L. Chase, '77,
Frank T. Fay, '78,

Albert M. Powell, '79,
George H. White, '79,
Ezra E. Clark, '80,
Charles L. Newcomb, '80,
Earnest P. Sparrow, '80,
Lyman F. Gordon, '81,
Stephen F. Roberts, '81,
William D. Sewall, '82,
Horace W. Wyman, '82,
William L. Ames, '82,
Charles A. Earle, '82,
W. Frank Cole, '83,
Charles A. Clough, '83,
Allen H. Foster, '83,
James D. Hunter, '83,
Sanford D. Leland, '83,
William W. Estes, '84,
Alden H. Wheeler, '84,
Samuel M. Green, '85,
Moses B. Haven, '85,
Frank W. Sanderson, '85,
Charles A. Bartlett, '85,
Joseph Beals, '85,
Albert A. Gordon, Jr., '86,
Harry B. Sawyer, '86,
Edward G. Watkins, '86,
Walter G. Wesson, '86,
William W. Bird, '87,
Edward F. Miner, '87,
George P. Tucker, '87,
George E. Camp, '88,
Fred D. Holdsworth, '88,
George W. Patterson, '88,
George I. Rockwood, '88,
Fred W. Speirs, '88,
Albert P. Allen, '89,
Walter S. Ball, '89,
Isaac L. Rheutan, '89,
Arthur J. Bean, '89,
Loring N. Farnum, '90,
Paul B. Morgan, '90,
William L. Smith, '90,
Charles F. Treadway, '90,

Henry E. Warren, '90,
Julius W. Bugbee, '90,
Herbert E. Austin, '90,
Charles A. Davis, '91,
Fred. C. Hodgman, '91,
Daniel F. O'Regan, '91,
William H. Ramsdell, '91,
Arthur L. Rice, '91,
Edwin A. Taylor, '91,
Charles A. Davis, '91,
Elmer H. Fish, '92,
Alston B. Moulton, '92,
Harrison N. Paige, '92,
Clayton O. Smith, '92,
Edward L. Smith, '92,
Clarence E. Alderman, '92,
Frank W. Cheney, '92,
George H. Day, '92,
Charles Baker, Jr., '93,
John P. Coghlin, '93,
Arthur C. Comins, '93,
Edward A. Gage, '93,
Aldus C. Higgins, '93,
Earnest W. Marshall, '93,
Louis W. Rawson, '93,
Harry Sinclair, '93,
Leslie P. Strong, '93,
Edward W. Vaill, Jr., '93,
E. Stearns Wood, '93,
Harry L. Cobb, '94,
Clifton H. Dwinell, '94,
Clarence W. Eastman, '94,
Charles M. Allen, '94,
Theodore H. Nye, '94,
Walton B. Fuller, '94,
Harry C. Hammond, '94,
Lewis A. Howland, '94,
Edward H. Keith, '94,
Frank E. Kilborn, '94,
Fred. W. Sawyer, '94,
William J. Sperl, '94,
Eugene B. Whipple, '94.

times during his remarks the alumni gave the same enthusiastic expressions of approbation.

Dr. Mendenhall said he supposed the alumni would expect to hear something about the changes and improvements at the institute. He said in part:

"By the new engineering laboratory on the Institute grounds and by the new testing-plant at Chaffin's, the Worcester Polytechnic Institute places itself in the very front rank of engineering institutions of the country. There is no institution of learning that has a better equipment along its special line of work. I say this with confidence, because during the last ten years, I have visited nearly every like institution in the United States."

Continuing, he said: "I want to say very earnestly that I have before me one of the three or four forces that go towards making the institution what it is. Aside from material resources, the great body of alumni wields a great influence. We are measured by the product we turn out. But there are several other ways, aside from being able and successful men, that you can assist us. I would beg of you a little more interest in the means of getting others interested in the school. This can be done by showing expressions of approval in all proper places.

"There are 600 living graduates, which number will in a few years be increased to nearly 650. If each of those 600 will interest himself and turn the attention of one man to our school, you can see what a tremendous current will set in toward us. I am a great believer in the force of numbers. We can not accommodate 600 in the freshman class, but I would like to be able to reject material in order that we may have them knocking at our doors.

"There is another way that you can assist us. I have been trying to establish means of communication between men who are in responsible positions and those who are going out. In this way the strong might help the weak." He said he wanted younger men and those who engaged men to correspond with him so that he could assist both. He has received many letters from even those who are not graduates asking him to recommend young men, but he has not been able to do so on account of his recent appointment to the position.

"Another thing that I desire is to see on Institute Hill something which shall stand for this body of men. I feel they will have an increased interest in the institution, if they have some sort of a memorial building on the grounds. We need very badly a building for three distinct things and widely divergent interests.

"First, a building that shall contain a gymnasium. (Long and continued applause). We have at present no place in which our young

After the inner man had been satisfied, President Wyman rapped for order and introduced as first speaker Hon. Stephen Salisbury, the recently elected president of the board of trustees, who was received with hearty applause. He said the year past had been one of sadness and joy. Sadness in the losing of the president of the faculty, one of the best friends of the institute, who, by his faithful, honest work, had won the confidence and respect of every alumnus. The pleasures of the past year have been in the way of improvements, in the buildings, made through the liberality of the State, and in receiving the new president, who has come with so much learning and interest for the institution. The institute never presented a more favorable aspect than at the present time. The reputation grows broader, the material prosperity is increased, and there is no reason why, with the assistance of the alumni, who are now fully awake to this seat of learning, success should not only be assured, but surpass expectations.

The mention of Dr. Mendenhall's name by President Wyman, in introducing him to the gathering, was the signal for an outbreak of applause that continued long after the president of the institute had arisen to his feet. Several

men can take any active exercise at the institute. If they care for anything in this direction, they are obliged to go down to the rink, where the surroundings are not especially congenial. This takes them away from the atmosphere of the Institute, and I seriously object to it, but it has seemed to be absolutely necessary.

"We need, also, a hall for occasional exercises. Our Boynton Hall is hard of access, and does not accommodate as large audiences as we would wish. We are now having a series of lectures on Monday mornings at the school, which we would be pleased to have the alumni and friends attend, but this is impossible, as there is no room. I do not like it that we have to hold our commencement exercises in this building, for it removes us from the atmosphere of the school.

"We also need a building for a library, our present quarters in Boynton Hall being very seriously crowded.

"Let me go a little farther into detail and say that the three could be included in one building. An excellent location would be that just south of Boynton Hall on the gentle slope. The gymnasium could be on the first floor, with the entrance from the south, while the hall would be on the next floor, with a northern entrance. A suitable wing could be made for the library. It is my strong hope that this may be done, and I strongly feel it can be without being a burden to anyone. If this plan was earnestly taken up, I think your enthusiasm would be enlisted and then retained by such a structure as the one I have just outlined.

"Nearly twenty-five years have gone since the first class was graduated from the institute. Since that time the methods employed here have been copied very extensively, and now in every State there are imitators. This should be an encouragement and a lesson. Our position today is a different one. We compete with twenty-five other schools throughout the country, and we cannot rely on the good reputation of the past, but must strive ever to make this institute foremost in the educational world."

Charles G. Washburn, '75, made a very witty speech. He took up the line of thought advanced by President Mendenhall. He suggested that an alumni fund of \$50,000 be raised. The matter had been considered in executive committee meetings, and it was thought this could be done by finding twenty-five men in the association who would give \$1000 each, provided the rest of the alumni gave enough to swell the total to \$50,000. No action, however was taken on his suggestion at that time.

Toastmaster Wyman then announced that Mayor Marsh was unable to be present on account of business in Newport.

He read the following telegram from the Philadelphia Alumni organization:

"Philadelphia Branch Alumni Association, just organized, sends greetings to parent alumni association, and join heartily in all the toasts to-night.

W. P. DALLET, '81."

The guests of the evening were then excused, and the meeting again proceeded. The matter chiefly discussed was the suggestion made by Dr. Mendenhall, and all expressed themselves heartily in favor of the scheme. William R. Billings, '71, known as "the oldest living graduate," favored the plan, and thought it should be called Alumni Hall. James Logan spoke in a similar strain, and then a motion was put by Charles G. Washburn, that the executive committee be authorized to raise \$50,000 for an alumni building. This motion was at once seconded and unanimously carried.

Several members spoke on how the money should be applied. Some thought it would not be a good idea to combine the gym, hall and library. Others said they should not designate how the money should be applied, except that it should go for an alumni building. This was finally settled by a motion that it should be applied to the

Erection of an Alumni Building.

Then there was talk about the manner of subscription and when they should begin. Several suggestions were made. Mr. Bird of '87, set the ball rolling by stating that he would guarantee \$1000 from his class.

President Wyman said he would give \$1000 toward the object.

Mr. Logan stated that he could be counted on for the same sum.

Mr. Washburn stood up and said he would give \$1000.

Mr. Howe arose and stated that he was good for \$1000.

A member of the class of '93 said that his class had begun to take subscriptions long ago, and it has \$300 in its treasury now for the alumni fund.

A '91 man said there were six members of his class sitting near him and they had put their heads together and there was \$300 among them. He thought his class would give \$1000.

Several suggestions were made for the passing of a list for each man present to sign with the amount he would give, but it was finally decided that the members would give more after they had time to think what they could afford, and the paper was not passed.

It was after midnight when the meeting adjourned.

NINETY-FIVE'S SUPPER.

Thursday Evening, after the exercises in Association Hall, the class of '95 assembled in the Lincoln House for the final banquet and business meeting of the year. All the newly created S. B.'s were present, reinforced by several non-graduate members of the class.

The menus, which may never be exposed to the unsympathetic eye of the Faculty and public, were very bright and original. The list of toasts was as follows:

Toastmaster, HENRY D. TEMPLE.

"Naturally a Leader because of his voice,
good-looks, and feet."

"Achtzehn hundert funf und neunzig."

MDCCCXCV., EUGENE A. COPELAND.

"There may be others but we don't believe it."

The Faculty, ALVAH W. CLEMENT.

"Such a noble body of men have ne'er assembled."

Our Friends, HENRY S. FAVOR.

"He who burneth ye mid-night oil, is destined
for eternity."

"What have we accomplished?" FRANK J. BRYANT.

"We've done We've done and
now our show is over."

"Dos fellars what runs and jumps. See!"

HERBERT E. FIELD.

"On your mark—get set—go."

The Fair Ones, HENRY J. FULLER.

"My Pearl is a Bowery Girl."

"In one of his own," ALEXANDER W. DOE.

"I don't want to play in your yard."

"Tech as it should be," JOE M. TILDEN.

"With all her Faults, we love her still."

"Die Zuhunst," WM. H. MORSE, Jr.

"Not every man who paints his name on the rocks,
succeeds in making his mark in the world."

MUSICAL DIVERSIONS.

ROBERT H. TAYLOR, ARTHUR W. WALLS,
HERBERT J. CHAMBERS, TIMOTHY F. O'CONNOR.

After the supper came the business meeting, and then the auction, in which all class property was sold. Mr. Temple made an efficient auctioneer. The bidding was very spirited at times, especially between "The Senator" and "Our Orator."

Before separating for the last time, the Class enjoyed a ride around the city in a chartered electric car, finally dispersing shortly after five o'clock Friday morning.

"END OF THE CENTURY" BALL GAME.

The annual class ball game of the Seniors was played Monday, June 17, at the Harrington Homestead, the residence of Ex-mayor F. A. Harrington, near Lake View.

The entire class went down on the dummy at 2.30 P. M., and on arriving at the Harrington

farm, sides were chosen by Messrs. Martin and Gordon, nearly every member entering into the game. The sides then adjourned to the field of battle, and prepared for the fray as best they could. One of the conditions was, that the pitcher should be chosen by the opposing side, and as the poorest men were selected to do the twirling, the fun was greatly enhanced thereby.

Ex-mayor Harrington and his brother, Alderman D. A. Harrington, officiated as umpires, and their rulings were frequently called into question and furnished many heated discussions. Nothing but the massive physical proportions of the umpires saved them, and had they been smaller they would doubtless have been left on the field of battle.

Martin's side maintained the lead till the eighth inning, when Barber lost control of his adiabatic curves, and frequent bases on balls gave Gordon's side a substantial lead, which Martin's braves were unable to overcome. Alderman Harrington did his best to aid the endeavors of Martin and his followers, but his brother responded bravely to the call for aid from Gordon's side and saved them from defeat by his original method of calling strikes.

After the game, the Seniors repaired to the lawn where tennis, quoits and bowling amused them till 6.30 o'clock, when the clang of the supper bell called them to a sumptuous repast served by Caterer H. C. Johnson in the dining-room.

The class officers and those having commencement parts occupied seats at the head table. Each member of the class was presented with a handsome souvenir of the occasion containing a cut of the lawn and bowling-alleys.

After doing justice to the viands a short business meeting was held, and with "P. I.'s" and "Polly Wollys" for Ex-mayor Harrington the meeting broke up. Quite a large number, however, remained during the evening, and a hot bowling match was contested between teams captained by H. S. Davis and Field. Field's team won by 21 points. It became necessary on account of other attractions to bring D—y to the alleys by force, but he managed to get a creditable string nevertheless.

The party left for the city at 10 o'clock, tired but happy, and all voted it a most pleasant day of enjoyment.

THE WORK OF THE ATHLETES OF 1895.

May, 1894, saw athletics of the W. P. I. at its lowest ebb. The showing made at the Inter-collegiate games would have been a disgrace to a preparatory school. This was not because we did not have the material for a good team,

but because we did not have an efficient trainer, and also the general indifference and lack of interest on the part of the students. Dec. 13th, '94, Tech defeated Holy Cross in a team race, and Jan. 1st saw a big change in affairs.

The combined action of students and Faculty put a plan into operation which was eventually crowned with success.

The rink was hired and an efficient trainer, W. F. Donovan, was put in charge of the men. Then began a general hustling for candidates. The indoor meet and class championship team-race brought out men by the scores, and by March 1st there were 60 men in training. This meet brought out many new men, among them being Daniels, Lundgren, Hitchcock, Brown, Vaughn, and many others.

After the meet, the men were given a rest until the middle of April, and then began outdoor work, and the prospects for Interscholastic were fairly good.

The showing made by the men on May 18th, was one of which we might well feel proud. It is true, we only scored 5 points, but in every event we had men who qualified for the finals, and who were always in the race.

The three elements which make up a successful athlete are speed, endurance and experience. Through Donovan's efficient work, speed and endurance were by no means lacking, but all defeats of the 18th were due mainly to lack of experience.

In the trial heats of the 440 yds. dash on the morning of the 18th, the men were instructed to be satisfied with second or third. Yet two of them started off in the lead, killed themselves by breaking the wind for the crowd, and then either finished exhausted or dropped on the home stretch. Nevertheless, out of the nine men who qualified for the finals, Worcester Tech had three, one of whom won the finals.

Lundgren, in the high hurdles, showed that he is a star. He ran the trial heat in elegant form, but in the finals when second to Chase, he struck a hurdle, lost his head and second place, which he would doubtless have won. Lundgren, with experience, will hold his own with the best, and will be a prize winner for Tech in another year.

Morse did equally well in the low hurdles; he was leading Chase by a yard, 60 yards from the finish, when he fell, a thing he never did in practice. He, too, with experience will make a hurdler that Tech will be proud of.

Tech has a quartet of quarter-milers that cannot be equalled by any college in the country. Allen and O'Connor are old runners, and it is needless to state their well-known good and bad qualities. Vaughn should be ranked second for

speed in the indoor relay team, but the Tech show ruined his outdoor prospects, for he was compelled to keep late hours for two weeks, and that would kill any man in training. Nevertheless, Vaughn made great improvement the last few days, and in his trial heat ran a close second to Hann of Dartmouth. Daniels is a new man, and one who, if he trains properly, will do good work. Interscholastic day he lost his head, and his endurance was not of the best; but proper training and experience will do wonders for him, and we shall yet see him win many a good race for Tech.

Barbour, in the mile walk finished fourth, but was comparatively fresh, or in other words, he did not have any confidence, and was beaten before the race was started. Barbour is a good square walker, and never skips or runs. Had he had sufficient experience he would have been placed, but this is only his first season, and we expect to hear from him in another year.

Brigham is one of the best all round athletes in the country. He has strength, but has not as yet learned the art of putting shot or throwing hammer, but is improving; and when he has accomplished this feat, it is needless to say he will be a N. E. I. champion. Brigham works hard and faithfully, and no one deserves success more than he.

Perkins, the Freshman bicycle rider, rode in great form at the games, and showed that with proper training he can hold his own with the best of them.

And now what are the prospects for next season. This year we lose O'Connor, Allen and Field, still leaving a good nucleus for a strong team.

In 1894, Tech put forward her poorest team. Harry Dadmun has said that the team of this year is the best that Tech ever had, and would have won the championship in '88 or '89. Most of the success of this year is due to Mr. E. B. Whipple, who managed the team in such an efficient manner that the association did not owe a penny at the end of the season.

The one great drawback is the lack of interest shown by students, and especially this year by the Freshman class. The attendance at the Tech Field Day was discouraging, and can only show that we have very little college patriotism. No college team can be a success unless it has the backing and sympathy of the whole college. And yet the students of the Tech seem to think that it is not necessary to back their fellow classmates. Another great fault which is not as yet entirely eliminated, is the old cry of class before college, and damaging the interest of a college team to satisfy some petty class feeling. Few know how near our Indoor meet came to being a failure from this very reason, but which

through the action of the committee was averted. And now that athletics are again on a firm footing, let every student do his best to advance the best interests of the COLLEGE, leaving class as it should be, only secondary.

The hard routine work done this year will bear fruit next season, and many a promising man will come to the front who will distinguish both his college and himself.

The Faculty and Alumni are interested in us more than ever before, and the good showing made during the past season, which ended May 18th, has given sufficient reason to know that we are bound to succeed. To Trainer Donovan, we are deeply indebted, as we are also to the Faculty and Alumni, and those who managed the team.

With faithful training the coming season and a successful Indoor meet next winter, we shall find that the men who represent us in '96 will have all the three elements for success and in the Intercollegiate games it will take two figures to show the points won.

SENIOR RECEPTION.

On Tuesday Evening, June 18, Horticultural Hall was the scene of a merry gathering, the occasion being the annual graduation reception and hop of the Seniors. The hall was prettily decorated with palms, while streamers of purple and white, the class colors, hung in festoons on the walls and balcony railing.

Mrs. T. C. Mendenhall, Mrs. Henry A. Marsh, and Mrs. David Harrower received, the guests being presented by the corps of ushers consisting of Geo. S. Gibbs, W. H. Cunningham, J. B. Mayo, '96; Geo. W. Throop, Roy A. Barnard, '97; Harry L. Hastings, Frank C. Harrington, '98.

The pictures of members, collected in a large frame, occupied a prominent place on the platform and was the centre of attraction.

Chaffin's full orchestra was in attendance, and the music was excellent.

After a short concert programme the grand march was started shortly before 10, and dancing continued till after 1 o'clock, eighteen numbers being on the programme. The dance orders were very neat, being in purple and white.

Order of Dances.

- | | |
|--------------|--------------------|
| 1. Waltz. | 4. Portland Fancy. |
| 2. Two Step. | 5. Waltz. |
| 3. Polka. | |

INTERMISSION.

- | | |
|--------------|-----------|
| 6. Two Step. | 8. Waltz. |
| 7. Galop. | 9. Polka. |

- | | |
|---------------------|---------------|
| 10. Schottische. | 15. Polka. |
| 11. Two Step. | 16. Waltz. |
| 12. Portland Fancy. | 17. Two Step. |
| 13. Waltz. | 18. Waltz. |
| 14. Two Step. | |

During intermission refreshments of ice-cream and cake were served.

Those of the Faculty present were Dr. T. C. Mendenhall, Prof. George C. Gladwin and Miss Gladwin, Prof. and Mrs. George I. Alden, Dr. and Mrs. A. S. Kimball and Miss Kimball, Prof. and Mrs. Joseph Beals, Prof. Arthur Kendrick, Dr. George H. Haynes, Prof. W. W. Bird.

THE W. E. S.

The Washburn Engineering Society held its annual meeting June 19th, at 2 P. M., in the chapel of Boynton Hall.

President Clement in opening welcomed the non-resident members, and spoke of the increasing importance of the meetings as the facilities of the Institute increased. Secretary Alden then read the minutes of the previous meeting, after which the President introduced Dr. Mendenhall, who spoke for a short time in an informal but intensely interesting manner. Among other things he said:

That the Washburn Engineering Society was one of the main things which strongly impressed him when he came to the Institute last October. Recently he had spoken before the Worcester County Society of Civil Engineers and suggested that they unite with the Washburn Society, thus bringing the professional engineers of the city in contact with alumni and students, which would tend to give the society a more professional character and be beneficial to all. He also hoped that the society would be materially increased by absorbing the other society, thus making it a really strong association. The improvements which had been going on during the past year were not as far advanced as had been hoped for; the engineering laboratory is rapidly nearing completion, also the power-house, in which are to be various kinds of engines capable of a large number of combinations. A gas plant is also to be installed in the new power-house, which will give the students opportunities to study those questions which are agitating the scientific men of the period; notably the comparative efficiencies of gas and steam as motive power. Engineers, and young men particularly, seem to think that all the problems connected with this branch of engineering are already solved; and all that they have to do is to pick up the odds and ends. Never in the history of mechanical engineering have greater problems confronted us. He cited as an instance, the generation of elec-

tricity from the heat energy of coal without turning it into gas or steam, and said that the man who solved the problem would achieve undying fame. He also remarked, that we are no further advanced than we were ten years ago as regards this problem. There is also a probability that steam may go out of vogue as a motive power, be put upon the shelf as it were, which would affect many of the members present. The hydraulic testing-plant at Chaffin's is practically completed. The Institute is indebted principally to Mr. Salisbury, the donor; also to the advice of Trustee Morgan, and to Professors Alden and White, who designed it to a large extent. Dr. Mendenhall said that he was really proud of this plant and did not have any scruples about boasting of it, and said that there was no engineering school in the country which could compare with us in hydraulic engineering on a large scale. In conclusion, the speaker warmly welcomed all.

Professor Alden cordially invited the gentlemen present, and members of the society generally, to favor the society with papers; and if it would be impossible for them to be present to read them, to send them to him and they would be read before the society. He also desired gentlemen who would do so, to give him their names so that something might be ready for the fall meetings.

Trip to Chaffin's.

After the meeting, the members spent the remainder of the time until 3.15 in inspecting the buildings and shop and renewing old acquaintanceships. Leaving on a special train from the Lincoln Square depot, the run to Chaffin's was made in short order.

The hydraulic testing-plant is situated less than an eighth of a mile from the railroad. It is a small, brown-shingled, one-story building, with a tower in the middle to hold the tubes in which the water rises to the level of the pond. The water enters through a penstock on the first floor, which drives a turbine wheel and is then discharged through a penstock into the weir below.

To show non-resident members the working of the plant, there was a series of tests of an 18-inch horizontal Hercules turbine water-wheel. They were actual tests, and included all accurate measurements necessary. A volunteer corps of students, under the direction of Prof. Bird, took the required readings. There were three tests of three minutes each. The gate opening in each case was eight-tenths. The head on the wheel was 29.3 feet. An Alden absorption dynamometer, ten feet in circumference, was used to measure the power developed by the wheel. The quantity of water used was measured both by

the weir and by the large 36-inch Venturi meter, which is one of the most valuable parts of the equipment.

The tests were remarkably successful, owing to the systematic methods employed by Prof. Bird. One student was made timekeeper, and at the sound of his gong, readings were taken by the other men, one of whom was stationed at the float in the tail-race, another at the dynamometer, and another at the hook-gauge in the weir. During the different tests a horse-power of from 65 to 70 was developed.

The results of the test showed the efficiency of the wheel to be almost exactly 80 per cent., which under the conditions was considered fairly high. After the tests were finished the working of the speed regulator was shown.

Tests of high class apolaris water were constantly going on, which gave birth to no end of merriment. Prof. Gladwin was on hand with his sketch-book, also a "kodak fiend" got in his work.

After a most enjoyable afternoon, the party, which consisted of something like one hundred and ten, most of whom were graduates, returned, arriving in Worcester at five-thirty.

CLEVELAND BANQUET.

The Cleveland Alumni Association had the pleasure of entertaining President Mendenhall, Wednesday evening, June 5th, on the occasion of their semi-annual meeting and dinner at the Hollenden in that city. To add pleasure to the event and at the same time to spread the Tech idea, the head of the various educational interests in Cleveland were invited to be present, and almost unanimously responded.

At seven o'clock, the members of the association with their guests sat down to an elaborately spread table strewn with roses and carnations, and discussed an excellent menu at which nothing stronger than Roman punch appeared, owing to protest of Secretary Chase, the association not desiring to lay itself open to a reprimand from his pen. (See W P I, Dec. 15, 1894). After the cigars were lighted, President Fuller, in a few brief remarks, expressed the pleasure of the association in having President Mendenhall present with them and welcomed him to the city, after which he called upon him to tell of the present and future of the Institute. Pres. Mendenhall spoke for about half an hour and related the great progress made within the past few years and of the buildings in course of erection, commanding the intense interest of the Alumni present and their guests.

Prof. Langley responded for Case School, Supt. Jones for the city, and Prof. Anderson told of

the work being done by way of preparation at the University School; after which all attempt at set speeches was dropped, and reminiscence and anecdote held the board for the rest of the evening.

Those present were: Pres. Mendenhall; Prof. J. W. Langley, Case School of Applied Science; Pres. C. F. Thwing, Western Reserve University; Principal N. M. Anderson, University School; Prof. L. H. Jones, Superintendent of Public Instruction; Hon. L. E. Holden; Principal E. L. Harris, Central High School; Principal T. H. Johnston, West High School; Principal G. A. Ruetenik, South High School; Frank Aborn, '71; Wm. H. Bailey, '74; John G. Oliver, '82; Willard Fuller, '84; F. W. Treadway, '90; and W. T. White, '90.

Prior to the dinner, the annual election of officers occurred and resulted in the election of Willard Fuller, President; F. W. Treadway, Vice-President; and John G. Oliver, Secretary and Treasurer for the ensuing year.

93's REUNION.

More'n Thro'.

The Class of '93 held its first Reunion at Rebboli's, June 20. A room was reserved for the class in the Y. M. C. A. building, and an adjournment to supper was made at 10.45. The menu card had on the outside the familiar goat's head, 93's mascot, with the words "More'n Thro'". After supper toasts were responded to by Messrs. Farwell, Strong, Larkin, Baker, Coughlin, Higgins, Hodgkins and Phillips.

A very interesting letter from Kuwada was then read.

At the business meeting quite a discussion of the plan for an Alumni building followed, and a spirit of hearty co-operation with the executive committee of that body was apparent.

The officers elected for the ensuing two years were: E. W. Vaill, Jr., president; E. E. Kent, vice-president; H. Sinclair, secretary and treasurer.

The same committee was retained on the '93 fund, Messrs. Heard, Larkin and Flinn.

A feature of the Reunion was the hearty singing of the Tech songs in '93's Class Book.

Copies of the Baccalaureate sermon, printed by Dr. Merriman, were distributed, and a vote of thanks for his thoughtfulness was sent to him.

The 26 members present were: Andrews, Baker, Buzzell, Cheney, H. G. Clark, Comins, Coughlin, Denny, Derby, Farwell, Flinn, Gage, C. E. Goodrich, Higgins, Hodgkins, Kent, Larkin, Marshall, Newton, Rawson, Rice, Sinclair, Strong, Vaill, Wood, and W. C. Howe, a past member.

Other Reunions.

'83 and '91 both met at the Lincoln House, and after partaking of excellent dinners served by Landlord Frost, renewed old times and discussed the project of an alumni building at the Institute. The class of '91 elected these officers: President, Fred A. Bigelow; Vice-President, Fred C. Hodgman; Secretary, John P. Rogers; Treasurer, Harrison P. Eddy.

The Bay State House was the scene of '86's celebration, when, at 7 o'clock, about 15 members of the class sat down to supper. The following officers were re-elected: President, Higgins; Vice-Presidents, Watkins and Sawyer; Secretary, Gordon; Treasurer, Green. It was after midnight when the jolly company broke up.

The members of the class of '89 held their reunion at Lakewood Inn, at Lake Quinsigamond. A splendid supper and a general good time were the features.

'95's AFTERMATH.

'95 has not fallen behind her predecessors in regard to her Aftermath. In size, it is the same as '94's, but instead of the steel gray and crimson cover, appears one of rich dark blue with "The Aftermath—'95," printed in neat gilt script letters.

A full description is entirely out of place here and should be unnecessary, as every Tech man should procure at least one copy, especially at the low price of one dollar, which is one-third less than that of last year's issue. The book, which by the way, is dedicated to Dr. Mendenhall, is first-class in every way; the paper and binding are of the best, the cuts are numerous and excellent, while most important of all, the stories and general reading matter cannot fail to interest and amuse every Tech man.

Below is given a brief synopsis of the contents:

Following the "Introduction" are given the names of the corporation, faculty, and instructors. Next is an excellent cut of Dr. Mendenhall, with a brief sketch of his life; in the latter part of the book also appears a short history and cut of Dr. Fuller.

After the cut of Dr. Mendenhall are given the officers or members of the different associations, societies, and clubs, each illustrated by an appropriate frontispiece. Next come a fine cut of Prof. Kimball, '95's popular professor, with a brief sketch of his life. This is followed by short histories of the four classes, each grotesquely designated by a suggestive cut: '98, by a kitten toying with the numbers 9 and 8; '97, by a couple of snails; '96, by a fox and '95; assumes the power and dignity of a lion.

Succeeding is a discourse entitled, "'95—A

Tale of Knowledge." The next cut includes five of '95's men, showing a full sized head but diminutive body, suggestive of each. It is very droll.

The personal sketches and photos of the graduating class occupy twenty-five pages and include, especially to the graduates, the most interesting reading in the book.

Our favorite authors, is what four most unpromising looking individuals are labelled on a succeeding page. Bryce, Chaucer, Wilson, and Isaac Walton are sweetly (?) portrayed according to their respective characteristics. The intelligent (?) expression of Walton is a study, while the others are by no means void of interest!

Following a cut of Dr. Fuller, is a cut and short history of last year's football team. Farther on, "Half way thro'" is illustrated by a suggestive cut, and a later page shows '95's athletic team.

"Farmer Jones," ending with an illustration of the significant expression "A pull" has doubtless been enjoyed for its jokes and humor. A group of five familiar Tech views are neatly arranged on the following page.

"Tom and Jerry," a story in rhyme, describes the misdeeds perpetrated by the class of '95; and a similar story farther on, entitled "Revenge," continues in the same strain. An article headed "Guy" is followed by sketches of the various courses. The last twenty pages are composed of a mixed variety of articles, including a synopsis of the Tech show, with cuts from photographs of the various groups.

A sad illustrated story throughout the add columns consists of ten chapters, and the hero therein represented should be a proper warning for others similarly inclined.

Though not ahead of '94's book, yet on the whole, the "Aftermath of '95," maintains the high standard of excellence of Tech "Aftermaths."

HOLY CROSS 12, TECH 3.

Tech played Holy Cross, June 11, and made a very creditable showing against their crack team. The first inning lost the game for Tech. The first two balls knocked were very poorly handled by Knowles and Philpot, and after that Holy Cross piled up seven runs. The remainder of the game was very well played. Holy Cross had considerable trouble in hitting Martin after the first inning. Tech did very little hitting and what hits were obtained were widely scattered. In the first inning Zaeder got the only home run that has been made off Pappalau this season. Fisher threw Sockalexix out at second,

a feat which has been done but once before this year. The score:

HOLY CROSS.

	A.B.	R.	IB.	P.O.	A.	E.
Kelly, c.f.,	6	1	1	0	0	0
Curley, 2b.,	4	2	1	4	2	1
Maroney, r.f., p.,	5	2	2	0	0	0
Powers, c.,	5	2	3	10	2	1
Sockalexix, l.f.,	4	2	2	1	0	0
W. J. Fox, 3b.,	2	2	3	3	1	0
McTigue, 1b.,	2	0	2	8	0	1
W. H. Fox, s.s.,	4	1	0	1	1	1
Pappalau, p.,	4	0	1	0	1	0
Gaffney, r.f.,	1	0	0	0	0	0
Totals,	37	12	15	27	7	4

TECHS.

	A.B.	R.	IB.	P.O.	A.	E.
Philpot,	4	0	2	1	2	1
Knowles,	4	0	0	1	5	2
Zaeder,	4	1	1	11	0	0
Harris,	4	1	1	0	0	0
Bunker,	4	1	1	1	0	0
Cullen,	3	0	0	0	1	0
Sibley,	2	0	1	4	0	0
Fisher,	3	0	0	9	1	0
Martin,	3	0	0	0	4	0

Totals,	31	3	6	27	13	3			
Innings,	1	2	3	4	5	6	7	8	9
Holy Cross,	7	0	0	1	0	0	0	0	4-12
Tech,	1	1	0	0	0	0	1	0	0-3

Earned runs, Holy Cross 6, Techs 1; Two-base hits, W. J. Fox, McTigue; three-base hit, Powers; home run, Zaeder; stolen bases, Sockalexix, W. H. Fox, Kelly 2, Pappalau, Sibley; double plays, Curley and McTigue, W. J. Fox (unassisted); bases on balls, W. H. Fox, Sockalexix, Sibley; hit by pitcher, Curley; struck out, Knowles 2, Harris, Cullen, Fisher 2, Martin, Curley, W. H. Fox, McTigue, Pappalau, Powers, Kelly; passed balls, Powers, Fisher; wild pitches, Pappalau. Time, 2h. Umpires, Murphy and McAleer.

TECH 14, EAST DOUGLAS 5.

Tech opened the season for the Athletics of East Douglas, Memorial day. The game was interesting throughout, although Tech did not have much trouble winning. Zaeder and Fisher did good stick work for Worcester and Fisher's catching was excellent. Tech made but one error in fielding, a fine showing considering the condition of the field. The score:

TECH.

	A.B.	R.	IB.	T.B.	P.O.	A.	E.
Philpot, 2b.,	6	2	3	3	1	1	0
Knowles, 3b.,	6	1	0	0	3	1	0
Zaeder, 1b.,	6	3	2	3	11	1	0
Harris, r.f.,	6	1	2	3	0	0	0
Bunker, l.f.,	6	1	1	1	2	0	1
Sibley, c.f.,	2	1	0	0	1	0	0
Warren, s.s.,	5	1	0	0	0	3	0
Fisher, c.,	5	2	2	2	9	4	0
Martin, p.,	5	2	0	0	0	4	0
Totals,	47	14	10	12	27	14	1

EAST DOUGLAS.

	A.B.	R.	1B.	T.B.	P.O.	A.	E.
Schuster, l.f.,	5	0	1	1	3	0	0
Reardon, 3b.,	5	0	0	0	3	2	3
Jones, 1b.,	5	0	2	2	10	2	3
Lavin, s.s., 2b.,	3	0	0	0	3	3	0
N. Roberts, 2b.,	2	0	0	0	1	3	1
Casey, s.s.,	1	0	0	0	0	0	0
McCann, c.f.,	3	1	1	1	0	0	0
Russell, r.f.,	4	2	2	2	0	0	0
M. Roberts, c.,	4	1	1	1	6	0	1
Heatherman, p.,	4	1	1	1	1	0	0

Totals,	36	5	8	8	27	10	8
Innings,	1	2	3	4	5	6	7 8 9
Tech,	0	2	1	0	0	6	4 0 1-14
E. Douglas,	0	0	0	4	0	0	0 1 0-5

Earned runs, Tech 4, E. Douglas 2; two-base hits, Zaeder, Harris; sacrifice hit, Schuster; stolen bases, Philpot, Knowles, Zaeder 2, Harris, Bunker 2, Warren; double plays, Warren, Zaeder, Knowles; first base on balls, Sibley 3, Lavin, N. Roberts, McCann; hit by pitched balls, Jones, McCann; struck out, Knowles 3, Zaeder, Schuster 2, Jones, Russell, Casey, Heatherman. Time of game, 3h. Umpire, Schuster.

TECH 10, LYCEUM 2.

The following is the score of the Tech-Lyceum game, June 1.

TECH.

	A.B.	R.	1B.	T.B.	S.H.	P.O.	A.	E.
Philpot, 2b.,	4	0	1	1	0	4	1	0
Knowles, 3b.,	3	2	0	0	0	2	2	1
Zaeder, 1b.,	4	2	1	3	0	9	1	0
Harris, r.f.,	5	0	3	4	0	1	1	0
Bunker, l.f.,	4	1	1	1	0	0	0	1
Cullen, s.s.,	3	2	1	1	0	1	1	1
Sibley, c.f.,	3	2	1	2	0	2	0	0
Fisher, c.,	5	0	1	1	0	7	1	2
Martin, p.,	4	1	1	1	0	1	3	0

Totals,	35	10	10	14	0	27	11	5
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LYCEUM.

	A.B.	R.	1B.	T.B.	S.H.	P.O.	A.	E.
Sheehan, l.f.,	4	1	1	1	0	1	0	0
Riley, 1b.,	4	0	0	0	0	7	1	0
Connors, c.f.,	3	1	1	1	0	3	0	0
Foran, 2b.,	4	0	1	1	0	6	1	1
Finnegan, c.,	4	0	1	1	0	4	4	0
Ryan, 3b.,	4	0	0	0	0	3	3	2
Loftus, r.f.,	3	0	0	0	0	0	0	0
Brennan, s.s.,	4	0	1	1	0	1	2	0
Clark, p.,	3	0	0	0	0	1	2	2

Totals,	33	2	5	5	0	*26	13	5
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*Harris out for not touching base.

Innings,	1	2	3	4	5	6	7	8	9
Tech,	0	4	0	0	0	0	2	0	4-10
Lyceum,	0	0	0	0	0	0	0	2	0-2

Earned runs, Tech 2, Lyceum 2; two-base hits, Harris, Bunker; three-base hit, Zaeder; stolen bases, Philpot, Bunker 2, Sheehan 2, Connors 2; first base on balls, Philpot, Knowles 2, Zaeder, Brennan, Cullen, Sibley, Connors; hit by pitched ball, Sibley, Martin, Loftus; double plays, Philpot and Zaeder, Ryan, Riley and Finnegan, Ryan and Foran; struck out, Philpot, Sibley, Sheehan 2, Finnegan, Ryan, Brennan, Clark 2; wild pitch, Clark. Time of game, 2h. Umpires, Gordon and Steele.

UNIVERSITY OF VERMONT 9, TECH 2.

Vermont defeated Tech without much difficulty, at Worcester Oval, Friday, June 7. Dinsmore pitched an excellent game, keeping the hits well scattered, and received fine support from the team. Martin also did well up to the last inning. The Tech's fielding, however, was loose. Vermont scored five runs in the first two innings and the opposing team could not overcome this lead. Pond played third base in fine form. Below is the score:

VERMONT.

	A.B.	R.	B.H.	S.H.	P.O.	A.	E.
Woodward, m.,	5	2	1	0	1	0	0
Pond, 3b.,	5	1	1	0	3	2	0
Hill, 2b.,	5	2	4	0	1	5	0
Naylor, c.,	4	2	1	0	3	2	1
Dinsmore, p.,	5	1	1	0	0	3	0
Daggett, s.s.,	3	0	0	0	1	3	0
Whelan, l.f.,	5	0	0	0	3	0	0
Dodds, r.f.,	5	0	0	0	1	0	1
Smith, 1b.,	3	1	0	0	14	0	1

Totals,	40	9	8	0	27	18	3
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POLYTECHNIC.

	A.B.	R.	B.H.	S.H.	P.O.	A.	E.
Philpot, 2b.,	5	0	1	0	5	1	1
Knowles, 3b.,	3	0	0	0	2	1	2
Zaeder, 1b.,	3	0	3	0	9	2	0
Harris, r.f.,	4	0	0	0	1	0	1
Bunker, l.f.,	4	0	0	0	2	0	0
Cullen, s.s.,	4	1	1	0	1	3	1
Sibley, m.,	4	0	1	0	0	0	1
Fisher, c.,	3	1	0	0	5	1	2
Martin, p.,	4	0	1	1	1	8	2

Totals,	34	2	7	1	*26	16	10
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Score by innings:

	1	2	3	4	5	6	7	8	9
Vermont,	2	3	0	1	0	0	0	0	3-9
Polytechnic,	0	1	0	0	1	0	0	0	0-2

Earned runs, Vermont 4, Polytechnic 1; two-base hits, Pond, Hill, Zaeder, Martin; three-base hits, Naylor, Dinsmore, Zaeder; stolen bases, Woodward (2), Daggett (1), Philpot (1), Cullen (2); first base on balls, off Pond (3), off Martin (2); first base on errors, Vermont 6, Polytechnic 1; struck out, by Martin (3), by Dinsmore (2); double plays, Hill to Smith, Hill to Daggett to Smith; passed balls, Fisher (2); wild pitches, Dinsmore; hit by pitched ball, Naylor, Daggett. Time, 2 hours. Umpire, G. C. Gordon.

*Naylor out on infield fly.

SHOP NOTES.

Orders for twenty elevators have been received during the past month, making business very brisk in the Shop.

A travelling crane has been put up in the new Shop for transporting heavy material from one side to the other.

The annual dose of whitewash has been applied with the visible results.

ENTRANCE EXAMINATION.

An entering class of from 75 to 80 is expected in the fall. While a large number have passed with one or more conditions, the following have been admitted without any:

Ernest A. Austin, Worcester.
 Charles B. Coburn, Worcester.
 Forrest W. Cole, Worcester.
 James A. Curtis, Worcester.
 Benjamin W. Dean, Worcester.
 S. Sumner Edmands, North Brookfield.
 Herbert H. Ferris, Greenwich, Conn.
 George A. Gabriel, Worcester.
 Archie N. Goddard, Worcester.
 Edward F. Gould, Springfield.
 Frank Hall, Fishkill-on-Hudson, N. Y.
 Herman W. Haynes, Worcester.
 Charles W. Hilbert, Worcester.
 R. H. Hitchcock, Chicopee.
 F. H. Howe, Worcester.
 J. F. Howe, Chicopee Falls.
 Wm. M. Johnson, Fitchburg.
 Clarence W. Kinney, Worcester.
 Howard C. Lyon, Chicopee Falls.
 Louis C. Nichols, Westminster.
 Chas. J. Rebboli, Worcester.
 Ernest E. Rich, Worcester.
 George R. Sanford, Worcester.
 Harry E. Scott, Westfield.
 Wm. C. Shute, Westfield.
 Edw. H. Simpson, Worcester.
 W. Fred Thomas, Worcester.
 Guy R. Vail, Worcester.
 Fred D. Valva, Worcester.
 Geo. S. Whittemore, Leicester.
 Samuel T. Willis, Worcester.
 Stephen G. Luther, Tiverton, R. I.
 Charles Eveleth, Worcester.
 E. R. Johnson, Wilbraham.
 Roy G. Lewis, Fall River.

ALUMNI NOTES.

'79. C. H. Parker, for 12 years draughtsmen at the Crompton Loom Works, Worcester, is at present with the Worcester Envelope Company.

'82. Hermann F. Klingele was married to Miss Minnie Sauer, June 19th, at the home of the bride in Worcester, by the Rev. Dr. Gunnison. Mr. Klingele is draughtsman in the office of the Holyoke Machine Co., in this city.

'85. James H. Griffin, assistant examiner of patents, was graduated Monday, June 10, from the Georgetown University School of Law as LL.M. Mr. Griffin has already obtained the degree LL.B. from the same institution.

'87. John A. Chamberlain, director of manual training, recently gave a reception to the Washington contingent of the Worcester Techs. There was a full attendance present, and a most enjoyable evening was spent.

'89. Louis H. Harriman, LL.B., National University School of Law, 1894, and assistant

examiner of patents, graduated June 5 as LL.M. Mr. Harriman has taken the bar examinations for the District of Columbia.

'92. John F. Bartlett, assistant examiner of patents, received a certificate for special proficiency in Patent Law from the National University School of Law.

Louis C. Smith, assistant examiner of patents, was graduated from the National University of Law as LL.B. Mr. Smith had the honor of receiving a certificate for proficiency in Patent Law from the university.

Michael J. Lyden, assistant examiner of patents, was graduated June 10th from the Georgetown University School of Law as LL.B.

'93. Nathan Heard, assistant examiner of patents, received honorable mention for his work in the Junior Class of the National University School of Law, and also a certificate for special proficiency in Patent Law.

Aldus C. Higgins, assistant examiner of patents, received the degree of LL.B. from the National University School of Law, and also a certificate for proficiency in Patent Law.

'94. M. C. Allen is with the American Telephone and Telegraph Co., 125 Milk St., Boston.

Mr. Eugene B. Whipple sails for Europe, July 4, on the *Aurania* from New York, for a two months' trip.

Harry L. Cobb, has obtained a position with the Westinghouse Electric and Manufacturing Co.

'91. Mr. G. E. Barton received the degree of Master of Science from the Columbian University on June 10.

The Graduate School of this Institution has several unique features. All candidates for the degree of Ph.D. are required to defend their theses before a board of experts, who receive copies of the same some days before the day of disputation. From this it will be seen that not only the candidate himself is on trial, but the board of experts also become directly responsible for any statements in the thesis provided they pass it, and therefore scrutinize it closely.

The mysterious disappearance of one of the two candidates for Ph.D. this year from the programme at the last moment, was directly due to the board of experts' examination.

Another novel feature, is the reading of the full record of each candidate for a degree before he is presented to the President of the University.

Thus before Mr. Barton was presented, Dr. Munroe, Dean of the Graduate School, read as follows:—

“Mr. George Estes Barton, of Massachusetts, received the degree of B. S. in Chemistry from

the Worcester Polytechnic Institute, in 1891, presenting a thesis on 'The Examination of Commercial Aluminum.' He held the position of Assistant in the Chemical Department of the U. S. Naval Torpedo Station and War College from 1891-1892, and as Chemist to a large manufacturing company from 1892-1894. He was admitted a candidate for the degree of Master of Science in this School in 1894; has pursued the study of Organic and Physical Chemistry; has made a large number of analyses; has passed a satisfactory examination; and has presented a thesis, entitled 'A Study of Glycerol,' which shows him to possess a thorough acquaintance with the subject, and in which he has brought together and presented in a very acceptable form facts that were widely scattered through periodical and patent literature, and those obtained in his own experiments. This thesis is accompanied by a very full and valuable bibliography."

'95. Henry J. Fuller is to be in the New York office of the Fairbanks Scale Co.

J. Arthur Leclerc is chemist at the Sewage Purification Works, Worcester.

H. E. Field is chemist at the Builders' Iron Foundry, Providence, R. I.

Arthur W. Walls is draughtsman in the Washburn Shops.

Bertram E. Savage is draughting for the Norcross Bros., Worcester.

E. A. Copeland is draughting for the H. C. Fish Machine Works, Worcester.

Fred M. Martin is draughting for P. Blaisdell & Co., Worcester.

A. H. Warren intends to take a post-graduate course in Marine Engineering at the M. I. T.

A. W. Clement is with the Wheelock Engine Co., Worcester.

TECHNICALITIES.

F. J. Ramirez, '96, left New York, June 11, to spend the summer in Europe.

Prof. U. Waldo Cutler is to spend the summer in Europe.

F. E. Knowles, '96, is dangerously ill with appendicitis.

Ex-'97. Cadet Edmund N. Benchley of West Point, has risen to the post of corporal and ranks among the highest in his class.

Three Seniors failed to get their degrees. In the other classes there were four Juniors, three Sophomores, and six Freshmen who lost their standing.

Mr. A. L. Rice, '91, Instructor in Steam Engineering and Thermodynamics, will enter Cornell in the fall for special study in the sciences.

E. F. Darling, '96, has just completed a small yacht which he has been working at off and on since last summer. He intends to sail it in Narragansett Bay, this summer.

Zaeder, Philpot and Martin are to play on the newly formed Worcester Athletic Club base-ball team. Games have been arranged with some professional clubs all over New England.

At the close of the examinations quite a number of the mechanics had their time made up and went home. Of those remaining, the out of town men had first chance as there was not room in the Shop for all. The civils will come back the last of August for their practice.

A co-operative society has been formed at the M. I. T. the purpose of which is to obtain situations for the students who desire to work during the summer months. Students not desiring to work in the Shop, had their choice between haying and sleeping on the top floor of Providence buildings.

Mr. George B. Viles, for three years instructor in German, will leave in a few days for Europe, to spend the summer studying the languages. He will return to this country in the fall and enter Harvard, of which he is a graduate, to study for the degree of Doctor of Philosophy.

The Trustees of the Institute held their annual meeting, Monday, June 10. Hon. Stephen Salisbury was elected president of the corporation to succeed Judge P. Emory Aldrich, deceased. Rev. D. H. Merriman was re-elected secretary. Rev. H. Jerome White, Pastor of the Pleasant St. Baptist Church, was elected a member of the corporation to succeed Rev. C. H. Pendleton resigned.

'90. In a description of the new Westinghouse Works at East Pittsburg, the *Electrical World* for June, says: "Mr. H. P. Davis, who is at the head of the detail departments of the Westinghouse Company, is a native of Great Falls, N. H. He graduated from the Worcester Institute of Technology in 1890, and after a year's experience with the General Electric Company at Lynn he came to Pittsburg, where he has since been connected with the manufacturing departments of the Westinghouse Company. Mr. Davis has done valuable work in the perfecting of such apparatus as street railway car controllers, rheostats, arc lamps, etc."

Brigham, '96, still holds the title of champion all around athlete of the county as a result of the Pentathland sports held at Springfield, the latter part of June.

The prospects of the Banjo Club are very bright for the coming season. Two members leave this year, but with the talent which is likely to be in the entering class, their places can be readily filled.

It is the intention of the football men to come back just before the opening of next term and get in some good solid work. The coach will have come by that time so that the men will be in fairly good shape when the season opens.

AFTERGLOW.

Against the purple mountains
Is etched the trees' dull red,
While o'er all, from the afterglow,
A soft rose light is shed;
Slowly the shadows lengthen,
The dew begins to fall;
But the light in the western heavens
Still vaguely illumines all,
And casts a glory celestial,
As when from old-time canvas
A face gleams dim and faint,
And a radiance hovers o'er it—
The aureole of a saint.

—*Western Reserve Mag.*

"SUNSET."

Evening.

And the sun is setting
Behind the mountains high,
And I look and wonder
At that sight in the sky.

Beautiful.

Yet can poets describe
Or artist's brush portray
That scene so glorious
Which I see? Who shall say?

The sunlight,

Gleaming with crimson red,
Blends with the azure blue;
And presents a picture
In shades of brightest hue.

The mountains,

'Gainst this sea of splendor,
With their peaks sharp and bold
Rise in distinct outline
Like castles built of old.

And above,

Most beautiful of all,
Hangs the golden crescent,
Like a sentry watching
For dangers still present.

O, Nature,

Appearing thus so fair,
We feel a might concealed;
And with that same power
Is thy beauty revealed.

And we know

Whence comes this great power;
For earth and moon and sun
Are, each and all, emblems
Of God, The Three in One.

And such scenes

O, our God, makes us feel
Thou'rt strong and we are weak;
Yet still we journey on,
And still thy beauty seek.

CHAS. A. PIERCE, '90.

MY PINNACE IS SLEEPING.

I.

My pinnace is sleeping
Upon the blue sea,
My Ella is keeping
Her watch for me.
Blow, gentle gale,
Freshen the sail
That lazily hangs from the high mast-tree.

II.

Oh wherefore delaying
In noonday bowers,
Still dreamily playing
With whispering flowers?
Come wanton gale,
Swell the white sail,
Too long have they lingered, the lengthening
hours.

III.

The petrels they hearken—
By gusty degrees
The swift ripples darken
The path of the breeze.
Thanks, merry gale!
The laboring sail
Hastens me over the spray-blown seas.

IV.

Few moments of sighing—
Soon shall I see
Her white signal flying
To welcome me;
Exult, wanton gale!
The pinnace assail!
Rend if you will the canvas free.

—*Yale Courant.*

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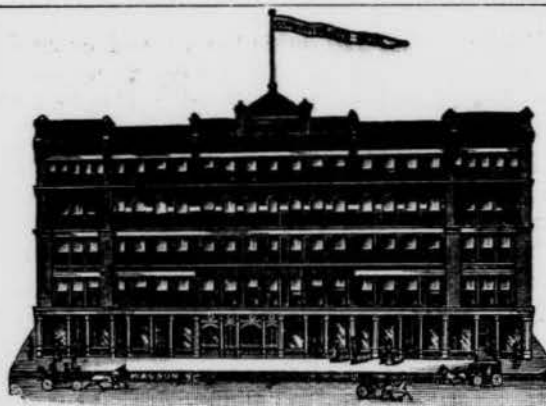
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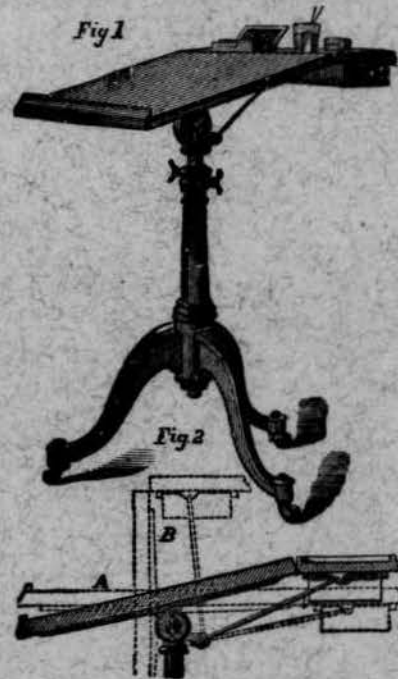
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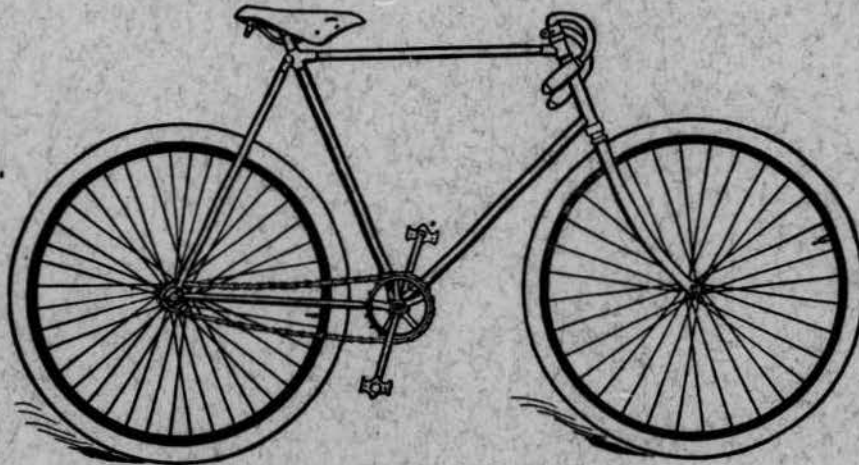
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